The Physical Educator

THE OFFICIAL PUBLICATION OF PHI EPSILON KAPPA FRATERNITY

AFFILIATED WITH THE AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION AND RECREATION

Vol. IV APRIL, 1944 No. 3

EDITOR

KARL W. BOOKWALTER, Ed. D.
527 S. Highland
Bloomington, Indiana

BUSINESS MANAGER

ALVIN ROMEISER, M. S.
2437 E. Riverside Drive
Indianapolis, Indiana

ASSISTANT EDITORS

A. A. ESSLINGER, Ph. D.
GROVER W. MUELLER, M. S. Ed.
CARL L. SCHRADER, M. P. E.
M. H. TRIEB, M. A.

CONTRIBUTING EDITORS

FREDERIC S. BEEBEE, Ph. D.
T. E. BLESH, M. A.
JOHN F. BOVARD, Ph. D.
H. H. HOUSE, Ph. D.
BEN W. MILLER, Ph. D.

CONTENTS

PROBLEMS AND PROGRESS IN COMMUNITY RECREATION *James E. Rogers* 82

PEACETIME PHYSICAL FITNESS *Willard Walter Patty, Ph.D.* 84

PHYSICAL EDUCATION IN THE A.A.F. *Lt. Gerald P. Burns* 87

RECOMMENDATIONS FOR PUBLIC SCHOOL PROGRAMS OF HEALTH AND PHYSICAL EDUCATION FOR THE POST WAR PERIOD *Frank S. Stafford, B.S., M.S.* 89

ALPHABETIZED AND GRADED LIST OF GAMES FOR ELEMENTARY BOYS AND GIRLS *Karl W. Bookwalter and Edna F. Munro* 91

THE RELATION OF INTELLIGENCE TO THE LEARNING OF FUNDAMENTAL MUSCULAR SKILLS *Louis Kulcinski, Ph.D.* 95

PROBLEMS IN HEALTH INSTRUCTION *Dorothy LaSalle* 102

TEAMWORK IN THE HEALTH AND PHYSICAL EDUCATION PROGRAM FOR THE LOS ANGELES COUNTY SCHOOLS *Lloyd E. Webster* 104

PRE-INDUCTION HEALTH *W. K. Streit* 111

HOW I AM KEEPING PHYSICALLY FIT AT THE AGE OF 78 *Dr. Robert Nohr, Sr.* 112

SAFETY IN HEALTH AND PHYSICAL EDUCATION *Karl W. Bookwalter* 118

BOOK REVIEWS 120

THE PHYSICAL EDUCATOR is published in the months of October, January, April and June, by Phi Epsilon Kappa Fraternity, a professional fraternity in physical education. Editorial offices are located at 527 South Highland, Bloomington, Indiana.

The publication is mailed to all members of the fraternity who are in good standing by reason of payment of current membership fees, and to others on the basis of a subscription fee of $1.20 per four issues. Single copies and back copies at 35 cents. ALL FINANCIAL TRANSACTIONS SHOULD BE DIRECTED TO THE BUSINESS MANAGER.

PROBLEMS AND PROGRESS IN COMMUNITY RECREATION

JAMES E. ROGERS
National Recreation Association

Recreation is now recognized as a basic ingredient in the life of the individual. It is as fundamental to an individual's health, welfare and growth as is work, food, education and the other basic needs for a good life. The test of a nation's civilization is largely determined in the hours of leisure and not in the hours of labor. People don't get into trouble when they are working or sleeping, but in their free hours. Education for leisure is as important as education for labor. Because of the shorter working day, which is limited by law to 40 hours a week out of 168 hours in the week, avocational education becomes as important as vocational education. The fourth R—Recreation—should be added to the three R's, so that the curriculum is Reading, Writing, 'Rithmetic and Recreation.

Children have three basic needs for normal growth and wholesome living, namely: (1) the right to an adequate education; (2) the right to sound health, and (3) the right to wholesome, sane play. Perhaps this last one is the fundamental one, because play is an urge or an impulse that is bred in the very physical, mental and emotional structure of the young. God gave the child the drive to play—man must provide the playground.

During the depression in the 30's, when youth was having a hard time, the Maryland Survey showed that youth wanted and needed the following four essentials to their growth and development: (1) work—a good job; (2) educational opportunity to improve their status and conditions; (3) love—the opportunity to marry and have a family and become a normal citizen in any community; and (4) the opportunity for the wholesome use of their leisure time.

Dr. Richard Cabot, of the famous Boston Cabots, wrote the noteworthy book, "What Men Live By." He said that men live by four fundamentals: (1) Work; (2) Worship; (3) Love; (4) Play.

Recreation is also a fundamental in community life just as is health, education and welfare. Recreation is a public concern and so just as you have public education, public health and public welfare, you now have public recreation. During the past fifty years in the rapid growth and spread of the community recreation movement, three concepts have been accepted: (1) that recreation is a basic community need; (2) that it is a function of government; and (3) that it is a responsibility of the local municipality to provide adequate programs and leadership through taxes. Today over 1,500 American communities have accepted this responsibility and are providing funds for recreational programs. Several hundred of them are doing the perfect job which is to provide a year-round program under competent leadership.

Out of the experience of the past fifty years, the following principles have been established and accepted, that a good municipal community recreation program shall consist of (1) a year-round program including indoor and outdoor activities for all the four seasons; (2) a broad program of varied interests in physical recreation, music, drama, arts, crafts, nature lore and social recreation; (3) a recreation program that will serve all the ages from the cradle to the grave—children, youth, young people, adults and old age—recreation programs for the individual, for the group and for the community as a whole; and (4) the mobilization and utilization of all facilities—parks, playgrounds, schools, streets, vacant lots and, likewise, all possible indoor halls, gymnasiums, auditoriums, etc. These are the four principles in program-building, and three essentials in organization necessary to effectively function these programs are: (1) a committee or board or commission whose main business is to promote and operate adequate, community-wide recreation; (2) an adequate budget; and (3) competent, qualified year-round leadership.

All public and private agencies are interested in recreation and it is impossible here in this short space to make a full statement about the contributions that all public and private agencies make to the general community services. However, here are a few brief statements.

The schools have a large and a fine contribution to make. Some do and some don't. The progressive school authorities, however, are coming to the conception that the schools are a community asset and the excellent facilities are to be used not only for children during the six hours of schooling and for the nine months of the school term but throughout the year as neighborhood community centers. There are some few cities that do an outstanding job in the total utilization of both their indoor and outdoor facilities for year-round recreation. This especially applies to the large cities. However, there is a great need for the wider use of the school plant for community recreation purposes. Of course the finest contribution the school can make is in the educational process of giving children attitudes and skills in the wise use of leisure-time activities that they can carry on after school and throughout life in the fields of music, art, reading,

nature study, sports, games, etc. This is a big subject and praise must go to many schools for their fine programs but a great deal is yet to be done in having school authorities think of schools as community neighborhood centers.

Industry for many years has conducted recreation programs within the plant. They have seen the need for recreation as essential for production and in relation to fatigue and emotional and nervous stresses and strains. Industrial recreation is a story in itself and it would take a book to tell of the plans and programs as conducted by General Electric, U. S. Steel, Santa Fe Railroad, National Cash Register, Endicott & Johnson, Hershey Chocolate Company and many others. During the past war and this war the government has put great stress on the need for industrial recreation programs, especially for women and girls. Our magazines and newspapers have been full of what is being done for the different shifts—the swing and owl shifts—also music during the day. Industries, however, are relying more and more upon the community recreation facilities and programs. Many community recreation departments are active in the conduct of industrial recreation programs. More and more industry is turning toward the local community recreation departments for the use of centers and facilities and for guidance and leadership.

Labor is taking a great deal of interest in recreation for their own unions and their own members. Some of them are doing a very fine national work. Labor is also actively participating in the community recreation programs. This is also a story that would take a book to write about what labor is doing throughout the country.

Of course we all know the fine work that the many different private agencies are doing both for their own membership and in contribution to the general community. Such organizations as the Y. M. C. A., Y. W. C. A., Boy and Girl Scouts, Camp Fire Girls, Boys' Clubs, Settlements, all have recreation programs and have participated in community-wide events and could have helped in the conduct of playgrounds and in the inauguration of youth recreation programs.

Church recreation is a subject in itself. Many of the churches in our large cities have church recreation centers with auditoriums and gymnasiums. Some of them employ year-round recreation leaders. The churches are now awake to the needs of youth recreation. Many of them are anxious to promote programs. This of course means leadership. The National Recreation Association has just published a pamphlet entitled "Recreation and the Church,"—a manual for leaders with a very good bibliography. It is impossible here to mention all the programs and the many fine contributions made by different organizations and individuals.

Recreation has gone to war. It has been given a high priority as an essential in winning the war. We have three fronts to win the war, namely (1) the War Front; (2) the Industrial Front; and (3) the Home Front. Recreation plays an important part in each one. We are familiar with the fine recreational programs promoted by all the armed forces—the Army, Navy, Marines, Coast Guard, etc. Millions have been spent for facilities, programs and leadership. Some of our best recreation leaders have been given commissions. It is reported that a general, returning from Alaska a year ago, said: "I have my men housed and am looking after their health; now I am anxious to take care of their recreation." There are three essentials in winning this war—Men, Machines and Morale. And recreation has a great deal to do with morale. In fact, before the war there were 27 governmental agencies promoting recreation and almost all war agencies dealing with people have recreation programs, such as Federal Housing. A statement has been made about the need for recreation in war industry. Different government agencies such as the O. C. D. and O. D. H. W. have promoted the formation of recreation committees in order to stabilize morale of the civilian, which is so important these trying days the longer the war lasts.

It is impossible to discuss the many postwar problems but here are a few just stated. There will be a great demand for community recreation facilities and programs by the men in uniform when they return to this country. This was true in the last war and it will be true again. To summarize:

1. These boys have become accustomed to adequate camp recreation of all kinds and they will demand it in their home communities.

2. Jobs will be necessary and we must provide them but, as was proven in the last war, any boy who has been through Guadalcanal and Salerno is not going to walk out of uniform and immediately up to a time clock and a lathe machine and begin to pull levers and push buttons. It took nine months to take a civilian and train him to be a soldier and it is going to take a few months to unwind him back to the normalities of civilian life and integrate him into his community, family, and job, and recreation will have many fine contributions to make. I would like to discuss this in detail but space prevents.

3. We will have to make our communities good places to live in, especially the small communities, if we wish to keep our boys back in the home town. This is a very much traveled soldier and sailor and he has seen many cities and many ports that he has liked and he has compared them with his own home town and unless the home town has something to hold him, he will go to the big cities. To illustrate, a father told me this story: He said, "My boy has

just got his first ten-day furlough; he has been away nine months. For the past three months he has been writing about getting home as fast as he could. He has been with me five days and tonight at supper he said, 'Dad, this punk town is dead, there is nothing to do and I want to get back to camp as fast as I can where things are stirring'."

4. Recreational therapy is becoming very essential not only for the physically-handicapped but also for the mental, emotional and nervous cases. Recreational therapy is closely allied to occupational therapy. This is a big subject in itself to tell about the needs and the interesting experiments and programs.

5. As after the last war, so again people are saying instead of war memorials of cement, granite and lead, how much better to erect living memorials such as community recreational centers. Already Amsterdam, N. Y., has bought and developed a five-acre playground in the name of a soldier who was killed at Pearl Harbor. This is a war memorial to his memory.

This is but a brief outline of recreation in peace, in war, and in the immediate postwar period.

PEACETIME PHYSICAL FITNESS

WILLARD WALTER PATTY, PH.D.
Director, Physical Welfare Training Department
and of the
Normal College of the American Gymnastic Union
of
Indiana University

THE GREAT GAME

What is your professional "form"? Do you possess a strong "follow-through"? Every golfer knows that failure to follow-through after the club head hits the ball is apt to result in a slice off the course. Physical educators have been "hitting the ball" in great form thus far during the war emergency period. This is no time for a letup.

What is your professional "condition"? Everyone knows that a "nine-hole player" never wins an important golf tournament. We are engaged in the most important tournament of the century—one in which the physical fitness program as well as the democratic social order is at stake. Only the preliminary rounds have been played. The future competition will be even tougher. Our "Physical Fitness Club" has already lost some of our most expertly-trained and ablest players to the armed forces. It is up to those of us still left in competition to win. The championship rounds lie ahead. The future months will be a stern test of our professional condition.

How high is your professional sportsmanship? There are many difficult "hazards" on this tournament course. There is the difficulty of getting adequate periodic medical and dental examinations for pupils to serve as a proper basis for a well-adapted physical activity program. There is lack of adequate time and personnel to carry on a persistent follow-up program for the correction of remediable defects discovered. There are occasional pupils who lack interest. There are many parents and colleagues who are not appreciative of our best performances because of their lack of understanding of the "game". Our program must carry on over traps of ignorance, indifference, tradition, and laziness; and roll on up over obstacles of inadequate financial support, insufficient supplies and equipment, lack of appropriate space, and heavy teaching loads.

Some whose names are connected with our association break under the pressure. They were not properly fortified professionally for such rigorous competition. Such a one picks his "program ball" up out of the sand traps of arranging for periodic pupil examinations and offers the alibi that many of the public and medical profession are not demanding them. Such a one kicks his program out of the tall rough caused by pupil indifference onto the fairway when no one is looking in order that his next "shot", while not honest nor technically as good, may appear to be excellent to the public spectators who are a considerable distance away. Such a one, instead of gamely playing his program out with a short iron when he discovers that the program has rolled into a traditional rut, surreptitiously tees it up so as to use a wood club for greater apparent progress and popular applause.

Such a one "burst into print" a few days ago. His interview was syndicated and read from coast to coast. He claimed that the war was about over and there was no longer a need for body-building and conditioning exercises. He said that the physical fitness program for all would not continue after the war anyway, and that he proposed to prepare the men for combat from now on through a voluntary program of a few sports: basketball, bowling, boxing, valley ball, etc. One suspects that his previously conducted compulsory conditioning or "hardening" program was so poorly managed that is became definitely unpopular. Therefore he placed another "program ball" on the fairway to win the applause of that portion of the student body who voluntarily come out for the activities henceforth sponsored. We regret his poor sports-

manship. It is doubly unfortunate that he could not have confined his alibis to his locality rather than to have sought national publicity, complete with photograph, in an effort to justify the change.

Almost all of us believe in an extensive and varied voluntary program of intramural and interscholastic sports. It is not necessary that there be a conflict between such a belief and a realization that we must also have universal participation in a required program of "body-building" and "conditioning" exercises together with appropriate sports and games.

Essentials of the War Physical Fitness Program

What are the basic characteristics of this thing which we have called the Physical Fitness Program during the war emergency period?

The program has naturally varied, in actual practice, from state to state and in the different schools within states. It has likewise varied from grade to grade—from the nursery school or pre-school through the university.

Apparently the physical fitness program promoted by the United States Office of Education as a phase of the Victory Corps Program in high schools may be accepted as the most typical. The following is the statement of the United States Office of Education concerning the program.

> "A basic objective of the high schools' wartime program must be the effort to make the greatest possible number of pupils physically fit to carry on as members of the armed forces or as efficient workers. According to the militaly training authorities the high schools' program for boys should stress aggresiveness, strength, endurance and muscular coordination. Motor skills and neuro-muscular coordinations can be developed in a variety of ways: formal calisthenics and body-building exercises; running; jumping; climbing; tumbling; wrestling; competitive team sports and games requiring bodily contact; marching; hiking; swimming; rhythmic dancing. Every high school boy and girl should participate in the program of physical activities appropriate to his or her abilities and needs. Whether for boys or girls important aspects of the physical fitness program must be periodic health examinations, correction of remediable physical defects, nutrition schedules, safety education, first aid, and knowledge of personal, community, industrial and military hygiene. In this program the school must solicit all the aid and cooperation which various health agencies of the local community can muster.[1]"

What are the major parts of the war physical fitness program as actually developed in practice by high schools? Briefly summarized they are as follows:

1. Periodic medical, dental, and physical examinations.
2. Follow-up of examinees to secure correction of remediable defects.
3. Medical advice in grouping pupils for varying degrees of strenuousness of activities.
4. The physical activity program.
5. Pre-testing and post-testing pupils each semester for achievement gains.
6. Health education classes.
7. First aid short courses.
8. Safety instruction.
9. Intramural sports program.
10. Interscholastic athletics.
11. Daily inspection and health supervision.
12. A physical fitness committee in each school integrating the activities of the school under the guidance and centralized authority of the chairman.

How is it working? About as one would suppose, but better than I expected. Occasionally one finds a school with all phases of the program organized and operating satisfactorily. More often an individual school is carrying on most of the aspects of the program while slighting or omitting two or three phases. Occasionally a school is discovered in which only a few of the features of the program are proceeding successfully.

How do characteristics of the war program differ from pre-war physical education and health and safety programs? Based upon direct observation[2] and conferences with supervisors and teachers in the field the following seem to be the chief alterations of the pre-war program made to fit war needs:

1. Includes both boys and girls every year.
2. Class time extended (usually 50 minutes or more).
3. Classes every school day instead of twice weekly.
4. Attention given to avoid waste of time.
5. All included by compulsion where formerly elective, at least in upper years.
6. Activities chosen in which all are active all of the time.
7. Activities more strenuous.
8. Activities chosen for individual physical and emotional development. Chief emphasis upon body-building and conditioning exercises.
9. Great increase in number of schools providing medical, dental, and physical examinations.

[1] Victory Corps for High School Committee: "High School Victory Corps", Victory Corps Series Pamphlet Number 1, U. S. Office of Education, Washington, D. C., 1942, p. 7.

[2] These characteristic changes were observed by the author who visited 88 high schools and held individual and group conferences with several hundred teachers and supervisors in the field during the past year.

10. Increased attention to follow-up program for corrections.
11. Spread of policy of protecting physical welfare of pupils by providing medical authority recommendations of types of activity for each pupil.
12. Marked increase in definitely-organized first aid instruction. Red Cross standards often met.
13. Definite trend of stressing social hygiene and occupational health problems in health education classes.
14. Apparent loss of enthusiasm and some decrease in amount of time in safety education.
15. Establishment of physical fitness committees in many schools which had not formerly attempted to integrate the program.
16. Somewhat lessened emphasis upon recreational aspects of physical education both in class and for future use.
17. A considerable increase in testing physical abilities both at beginning and end of semesters.
18. A marked increase in the interest of the pupil in self-development and comparison to standards.
19. A tremendous increase in demand for teachers of physical education, first aid, and health education; school physicians; and school nurses. Supply far below demand.
20. Tendency to plan programs of more greatly varied activities than before, chiefly due to retention of many previously used activities while adding developmental activities. This was possible because of added time.
21. Trend toward much more definite supervision than heretofore. This seemed to be due, not only to the fact that many inadequately-trained persons were employed in the expanded program, but also due to increased interest in securing definite and valuable results.
22. A definite trend to appreciate the importance of mental and emotional health as well as physical has developed. "Total Fitness" is becoming the accepted concept.

It is believed that the foregoing observations indicate the principal changes from pre-war to war programs in actual operation in high schools today. Undoubtedly there have been important changes made in individual schools that have been overlooked or omitted.

The war physical fitness programs in colleges and universities have been developed along lines similar to those of high schools. In the elementary schools an increase of attention to physical education, health education and health service has been noticeable. Some states, such as Illinois, have recently enacted laws requiring increased time and attention to physical and health education, while other states, such as Indiana, have provided for daily classes in physical education in elementary and high school grades by state board of education regulation.

Peacetime Needs

How may one have total fitness? He must earn and protect it. A well-balanced school program will help. The United States Office of Education Committee on Wartime Physical Education for High Schools stated:

> "It is recognized that programs of health service, health instruction, healthful school living, physical education, and recreation all have an important influence on physical fitness."[3]

Freedom from disease and physical defects is a goal for peace, as well as war, efforts. It is appreciated that complete freedom from disease and defects cannot be realized, but we must approach it as nearly as possible. The school health service program, including health examinations, follow-up remedial activities, daily inspections, and immunizations, must continue its development. The "education for health" program should be stressed as a positive preventive influence.

Physiological principles justify the essential characteristics of the physical activity program for peace, as well as war. Limitations of space permit only a few typical illustrations:

1. Muscles increase in size and strength as a result of exercises which tend to overload their current strength.
2. Skillful physical coordinations assist in developing self-confidence and lure the individual into additional working or recreational physical activity.
3. The internal organs of the body are exercised through their normal functioning and by pressures and relaxations resulting from big-muscle activities.
4. The healthy heart increases in strength and efficiency as a result of regular, strenuous physical use just as any other muscle does. This increase in effectiveness provides adequate circulation of the blood at a slower pulse rate than before. Since the heart rests only between beats this decreased pulse rate permits longer rest periods during which it is rebuilt, resulting in increased physical endurances for work and play.
5. Fatigue toxins in the human system resulting from regular, strenuous physical exercise of a healthy person contribute to sound, restful

[3] Sharman, Jackson R. and Committee: "Physical Fitness Through Physical Education", Victory Corps Series Pamphlet Number 2, United States Government Printing Office, Washington, D. C., 1942, p. 1.

sleep, thus contributing to mental and emotional as well as physical health.

The fight for mental and emotional stability must be continued during peacetime if the nation is to prosper. While we were making fine progress in our efforts to reduce communicable diseases before World War II we were losing ground in the areas of mental and emotional disorders. Approximately one-sixth of our population were affected by mental disorders. Almost one-fifth of our marriages ended in divorce courts. While the United States Army rejected approximately 6% (6.3% in 1941) of draftees because of mental and nervous conditions, reports indicate that 5% of its overseas hospital cases today are for mental diseases. The United States Navy reports that 20% of its discharges are for mental disorders. The 1941 draft figures as reported by the United States Surgeon General's office indicate that 6.3% of the draftees examined were rejected because of venereal diseases. These problems will continue to be important during peacetime.

What has our school total fitness program to contribute? We can do little to prevent marriage of the unfit. We cannot, alone, arrange for those unsuited for extended schooling to secure earlier employment with its stabilizing influences. We cannot, alone, encourage earlier marriages of the fit. We can do little to soften the impact of a complicated and intense world upon nervous systems which, in many cases, are too unstable to cope with the sensations experienced—a world made small by aviation and radio—which gives first news place to crimes and scandals and disregards the educational publicity value of upright sane living and desirable social conduct.

We can help the individual to improve his personal appearance by a physical fitness program. Regular physical exercise paints the cheeks from the inside. Improved physical coordinations contributes to self-confidence and grace of movement. Physical strength is favorable to good posture. Better physical health makes vivacity and friendliness possible without artificial stimulants. We can help to bring about happier home life by improving our school health program and recreational program and by closer teamwork with parents. The juvenile delinquency problem will not be solved by preachment alone. We can help to reduce juvenile delinquency by a strenuous physical activity program and by increasing properly supervised recreation.

The peacetime emphases of our total fitness program should be upon self-development, health conservation, and wholesome recreational enjoyment.

Peacetime Challenge

Why be fit for war only? If we must be "totally fit" to fight successfully for the right to live, should we not fight for the right to be "totally fit" in order to live successfully?

We are confronted with a severe test of our professional "form", "condition", and "competitive spirit". Shall we be able to "follow-through" and finish the war job with credit while also organizing a suitable program of "total fitness" to continue during peacetime?

It is acknowledged that health and physical development are essential in winning the war. We must convince our colleagues and the public that total-fitness is necessary in winning the peace. Health and physical-development are indispensable to effective working service and personal happiness in peacetime. Now is the time to crystallize this concept into definite curricular plans, board regulations, and statutory requirements.

We must "follow-through"!

PHYSICAL EDUCATION IN THE A.A.F.

LT. GERALD P. BURNS
Army Air Base, Sarasota, Florida

Ralph Ingersol, former editor of the New York newspaper PM, has written a book destined to become one of the greatest "war books" ever published. Ingersol is a great writer and a good soldier; other than that, he has no specific professional qualifications in terms of physical education. Yet, toward the end of his story especially, he reveals a fundamental genius for observation along such lines. The following paragraph is quoted:

"Our allies—the great Red Army and Alexander's men in Africa—mastered the German attack for us and we fight successfully now because we are armed with knowledge of weapons and tactics which they bought for us in blood. But we entered this war already trained to think in terms of thousands of miles and millions of tons, so our supply organization is already the equal of the Reichswehr's. Taking the submarine menace as a constant, there remains, then, only the problem of what is euphemistically called 'seasoning' our troops. This is a process not of finding courage—there is enough courage to go around—or of learning the tricks of the trade of killing—men learn quickly on the battle field. It is simply the process of our troops becoming tough and self-sufficient enough to get themselves quickly to the scene of action and to arrive there in the pink of physical condition."

If only we might have the benefit of one of Ingersol's closing chapters (lets pick the one start-

ing on page 212) five years ago! What strides we might have taken in Physical Education; what lives we might have saved among those men who fell exhausted at Kasserine and Hill No. 29. It would be well for all soldiers, all educators, yes even all Americans, to read, "The Battle is the Pay-Off."

The mission of the physical educator in the Army is of extreme importance toward attaining the overall goal—"unconditional surrender" of the enemy. Ours is the job of training the men physically—conditioning their large muscles. Whenever possible we seek to train their minds at the same time instilling the "will to win" so necessary for a successful soldier. The objectives we seek are (1) absence from physical defect, (2) strength, (3) endurance, (4) agility, (5) coordination, and (6) "fight". We usually enlist the aid of the Medical Officer to attain the first and the aid of the Chaplain is often helpful in attaining the latter.

Our methods in the army differ from those we used in civil life. For example, when A knocks B down in our training now, A allows B no quarter. In past times, A would knock B down and immediately pick him up (and B would say, "Jolly good, old boy"). We must emphasize in our training—survival of the fiittest. There is no middle course once we are committed; our men *must be* the fittest.

Schools in the peaceful years, cared not to hark to the call of outstanding leaders in the field of physical education—the call for them (the schools) to stop and analyze their objectives, to restate their aims, and to place health and strength of the potential learners at the head of the priority list of subjects taught. We staff officers of the army who deal with the training of troops may now join with these older and wiser educators who sought for "health, strength, and virtue", and point to those superintendents of schools, those educational administrators, and those curriculum supervisors—advising them that our boys (and girls) are far from the top physical shape that they should be in when entering the armed forces. Yes, we can harden them up in time, but think of the precious hours of training that could have been saved; and remember, thousands of Americans (and others of our allies) died to give us this training time.

Dr. Frederick Rand Rogers, in one of his many enlightening books[1], says, "The unhappy consequences of these inconsistencies—(failure to have a balanced educational program)—are not far to seek: they may be found, for example, in a physically weakened, if possibly longer-lived, citizenry; in a chaotic civilization, and in a world armed to the teeth, with the most highly schooled nations the best armed and most belligerent. Nor can the gross failures and improprieties of modern pedagogy be eradicated in a generation. But steps toward their correction may be taken by hopeful and courageous teachers and educators at any time."

We may learn many lessons in training our American men to be stronger, more skillful, and more brilliant than our enemies. One of these lessons we may well carry back to our former environs; i.e., we must modify American school programs sufficiently to conserve better the health of our boys and girls.

Since our trainees do not arrive in the best physical condition, we must present a studied, integrated, coordinated, and progressive program of physical activities. Many of the basic activities (especially in the infantry and cavalry) come under the category of physical training activities. Concerning ourselves with only the specific physical training activities, however, is quite sufficient. Directives of the various branches of the army call for approximately the same amount of physical training per day. In the early stages of training (basic), there are more and longer periods per day than toward the end (replacement).

Army Air Forces require an hour a day of "vigorus, supervised physical training" per man (for most classes of personnel). When a man joins his tactical unit, he is *expected* to be in fairly good shape and the job of the physical training officer is merely to maintain that level of fitness. For that purpose, an hour each day should suffice.

That hour a day is a required formation. The activities used must be vigorous and supervised by a physical training officer, or physical training noncommissioned officer. A good physical educator can usually have such a regular program as will keep the interest of the men and allow a certain amount of zest be shown toward "getting out" for physical training. A poor program will cause universal grumbling and seldom attain its aims.

In addition to the regular program, there is usually a recreation program organized by the physical training officer or the special service officer. Intra- and inter-unit tournaments and leagues are very popular on the larger installation. Smaller stations have found good off-duty competition with the local high schools.

Swimming, in the opinion of the experts, has not yet attained its proper proportionate place in the training program of the service. However it is clearly evident that the day is near at hand when aquatics will be recognized as equally important to the well-rounded training of a soldier as the ability to run 100 yards in 13 seconds.

Most men on entering the army, find themselves in an entirely new occupation. Some men are fortunate enough to be placed in jobs similar to those positions held in civil life. With but few exceptions, physical training officers (and to a large

[1] Dance, A Basic Educational Technique.

extent, physical training non-commissioned officers), are men who have carried on in this profession before entering the army. The majority of the physical training personnel in the army have had actual experience in the field of physical education, and hold one or more University degrees in the subject.

It is unfortunately true that most of the aforementioned facts are either unknown or not accepted by some officers of company and field grade. It is true—and fortunately so—that the commanding generals are (1) aware of the importance of their men being in superb physical conditions, (2) aware of the progressional means whereby this physical condition is brought about, and (3) aware of the necessary clarity of thought, planning, and professional knowledge on the part of the men responsibile for bringing this physical condition about (and maintaining it).

Whether the efforts of the physical training personnel are ignored, commended, or censured, the work will go on along the same high professional plane as usual, ever striving for greater fitness for those trainees and greater glory for the Army Air Forces, toward the one common goal—the winning of the war.

RECOMMENDATIONS FOR PUBLIC SCHOOL PROGRAMS OF HEALTH AND PHYSICAL EDUCATION FOR THE POST WAR PERIOD

FRANK S. STAFFORD, B.S., M.S.
Director, Division of Health and Physical Education
Indiana State Board of Health

Undoubtedly, there will be many different ideas regarding the content of the post war School Health and Physical Education Program. In this article I am not attempting to present a sinecure or to outline a definite program for the post war period. I merely wish to present some recommendations which I feel should be considered in planning our program for the future.

General Consideration for Local Programs

It is recommended:

1. That, in the main, no radical or sharp departures in the content of local programs be advised, but instead that a reaffirmation be made of our belief in a sound modern program of games, sports, athletics, hygiene, intramural and varsity athletics and health services as the best instruments for the post war period.

2. That our high school programs of health examinations, remedial procedures, health instruction and health guidance including mental hygiene be wisely and powerfully increased to the end that maximum service in preparing a healthy school population be achieved.

3. That we should encourage the teachers to improve the activity programs which they are now conducting.

4. That we reaffirm and make clear to all concerned that we believe the best contribution which physical education can make to the preparation of public school students for life in a democracy is in a program which extends active instructional, recreational and competitive opportunities *to every boy and girl in the public schools* chosen appropriately in accordance with individual needs.

5. That we endorse such a pattern of health and physical education for the public schools so as to require all students to receive instruction in physical education and health education adapted to their individual needs.

6. That in such programs as our schools offer, the instruction be not limited to activity skills alone, but that demonstrable ends in strength, endurance, social acceptability and an understanding appreciation of the democratic process be urgently and tangibly sought.

7. That we endorse strengthened relationships between departments of physical education and school health services to the end that the objectives of both can be better realized.

8. That teachers and administrators individually give their support and endorsement to local or state legislation enabling public funds to be expended for facilities and programs of physical education, health education and recreation.

The Activity Program

It is recommended:

1. That the content of our programs in physical education contain an abundance of opportunity for youth to achieve a sound physical condition through participation in vigorous active sports and games. The objectives of strength and endurance should be held clearly in view and individual programs should be arranged to attain these goals wherever compatible with the age and physical condition of the student.

2. That, while no specific and compulsory program of calisthenics or "conditioning" exercises seems desirable for all students, yet all should be given on a voluntary basis, an opportunity to participate in such activities as walking, running and combat sports, as will better prepare them for the current and singular requirements of life.

3. That, wherever feasible, schools open their gymnasia and organize instructional and recreative

groups for the community as a whole with special classes for those veterans needing rehabilitation. Special opportunities should be given to post-school inductees prior to their service if selective service is continued.

4. That physical education periods be organized so as to allow the maximum time for vigorous participation. It should be recognized that for the normal student, one hour of vigorous activity per day would be the minimum amount of time necessary to produce the desired results.

5. That school faculties and other employees be urged to avail themselves of the physical education facilities with periods or classes established for them and the administration of the program so arranged as to provide for maximum convenience in attendance.

6. That school administrators adjust the schedule of classes and laboratory periods so as to allow for the maximum use of the afternoon periods for physical education and other recreational activities.

Military Training and Drill

It is recommended:

1. That every effort be made to cooperate with the R.O.T.C. units, where they exist, and with any other form of military organization (e.g., Home Guards, Reserve Militia, Selective Service) to the end that the distinct purposes of both physical education and the military will be served.

2. That military drill not be considered as a satisfactory or desirable substitute for physical education in any school.

3. That military drill and marching tactics not be added to established physical education programs and that such activities, useful for military purposes, be regarded as distinctly within the province of military units.

Health Instruction

It is recommended:

1. That in institutions where the typical one hour a week, or one semester, health course is offered to students, an effort should be made to increase the time allotted and thus broaden and intensify the instruction given.

2. That every student should be provided, either on an elective or compulsory basis, with an opportunity to develop a better knowledge of and control over his individual practices of hygiene.

3. That, if selective service is continued, high school pupils close to the point of military service be offered instruction in such aspects of military hygiene as disease control, recreation and psychological adjustments.

4. That every student be given adequate and appropriate instruction in the prevention, care and treatment of all communicable diseases with special attention to the venereal diseases and sex education.

5. That every opportunity be taken in the physical education activity classes to instruct the participants in the hygiene of the activity and to instruct in all academic subjects the methods and principles of effective health behavior.

6. That, wherever feasible, the official Red Cross courses in first aid and life saving be introduced into the health and physical education programs, and that persons planning to enter military service or the industries be encouraged to acquire this information.

Health Service

It is recommended:

1. That every student be required to take a thorough physical examination upon entrance into school and also periodically thereafter to the end that remediable defects and handicaps can be found and removed.

2. That educational programs for immunization for smallpox, diphtheria and typhoid fever be established, and that the need for appropriate testing for tuberculosis and venereal diseases be taught.

3. That the school assume some responsibility for acquainting the student with all appropriate medical or surgical service available to all students in need thereof.

4. That all physical education activities be selected in accordance with the findings of the entering physical or medical examination, and that no activities be prescribed or elected except as the physical status of the student warrants.

5. That an adequate seasonal examination of all varsity and intramural athletes be a routine in departmental administration.

Aims and Purposes

The aims and purposes of the school health and physical education program recommended are as follows:

1. To develop physical and organic vigor; provide neuromuscular training; promote bodily and mental poise; correct and prevent postural and bodily defect, and to develop a correct carriage and mental and physical alertness.

2. To secure the more advanced forms of coordination, strength and endurance, and to promote the more desirable moral and social qualities, such as, an appreciation of the value of cooperation under leadership, self-subordination, obedience to authority, higher ideals, courage, self-reliance, disciplined initiative, self-control and a wholesome and robust interest in recreational activities.

3. To promote a hygienic school and home life and to secure scientific supervision of the sanitation of school buildings, playgrounds and athletic fields and the necessary equipment thereof.

4. Such course should likewise include suitable instruction in personal and community health and safety; the privileges and responsibilities of citizenship as they are related to community and national welfare and the production of the highest type of patriotic citizenship.

ALPHABETIZED AND GRADED LIST OF GAMES FOR ELEMENTARY BOYS AND GIRLS

KARL W. BOOKWALTER and EDNA F. MUNRO
Indiana University, Bloomington, Indiana

This list of games was compiled from a score of source books and courses of study. The authors were both teaching games to teachers and one to children at the time of the study. This close acquaintance with games made the accuracy of title (there is great variety in titles for games and some similar names for different games) and final grade placement more likely. In instances of obvious misplacement the authors edited the findings of the study. Teachers new to the field should find this list quite helpful in planning suitable games for each grade level.

	1	2	3	4	5	6	7	8	Reference
*Animal Chase (Tag) (The Hunt)		X	X	X	X	X			46B, 110B, 231S, NV171, 237MM
Ball Puss				X	X	X			327B, NV123, 222MM
Ball Stand (Wall Ball)			X	X	X	X			416B, 133S, 268NV
**Baseball							X	X	Sp
**Basketball—Boys 7-8							X	X	Sp
Basket Throw (Bean Bag Box)		X	X	X					NV123
*Baste the Bear				X	X	X			49B
**Bat Ball (Schlag Ball) Boys 4-5—Girls 4-6				X	X	X	X	X	151NV, 338MM
Bean Bag Tag			X	X					126NV, 90EC
Bean Bag Circle Toss (Toss and Catch)			X						305B, 130S, 123NV
Bean Bag Target Toss (Target Toss)				X	X	X			315B, 129S, 231NV
Bean Bag Board			X	X					304B, 37MM
Bean Bag Sideways Pass		X							226S?
*Bird Catcher	X	X	X						52B, 95NV, 117AM
Black Tom		X	X						54B, 157F, 269MM
Bodyguard				X	X	X			56B, 138S
*Boiler Burst		X	X						26S, 167NV, 114AM, 224MM
Bombardment						X	X	X	334B, 202S, 59W
Bounce Dodge Ball					X	X			141S, 203S
*Broncho Tag (Hook on Tag) (Freight Train) (Catch the Caboose)					X	X			204S, 82S, 350NV, 233MM
Brothers (Double Circle) (Musical Elbows)				X	X	X			50S, 209S, 96NV
*Brownies and Fairies	X								111AM, 262MM
Bull in the Ring			X	X	X	X			143S, 56B, 119F, 238MM
*Call Ball (Number Ball) (Spud)		X	X	X					338B, 222S, 255MM
**Captain Ball— Boys 5—Girls 6-8					X	X	X	X	65A, 338B, 79S, 193NV, 499MM
*Cat and Mice	X	X	X						59B, 25S, 89NV, 108AM
Catch and Pull Tug of War					X	X	X	X	60B, 350NV, 304MM
Catch of Fish				X	X	X			61B, 232NV, 272MM
*Center Base			X						354B, 148S, 238MM
Chain Tag (Boys only)					X	X			51S, 315NV, 271MM
Changing Seats	X	X	X						27S, 63B, 96NV
*Charlie Over the Water	X	X	X						65B, 112AM, 247MM
Circle Ball	X	X	X						356B, 243MM
Circle Blind Man's Buff (Blind Man's Buff)	X	X	X	X					55B, 75S, 251MM
*Circle Stride Ball (Pig) (Center)				X	X				207S, 358B, 231NV, 494MM
*Club Snatch (Stake Snatch) (Schoolroom Club Snatch)					X	X			227S, 72B, 268NV, 102EC, 273MM
*Corner Ball				X	X	X	X	X	359B, 153S, 497MM

ALPHABETIZED AND GRADED LIST OF GAMES FOR ELEMENTARY BOYS AND GIRLS—*Continued*

	1	2	3	4	5	6	7	8	Reference
**Corner Kick Ball (Line Soccer)—Boys and Girls 4-5				x	x				107S, 68W, 405MM
*Corner Spry				x	x	x			360B, 153S, 211MM
*Crossing the Brook	x	x	x						208S?, 74B, 90NV, 8MM
*Cross Tag					x	x			75B, 86S, 269NV, 240MM
*Crows and Cranes (Black and White) (Heads or Tails) (Oyster Shell)				x	x	x			266MM 52B, 137S, 143B, 152S, 169AM
Dead Ball							x	x	362B
*Dodge Ball (Dodge Ball Team Form				x	x	x			363B, 152S, 146NV, 280MM
Dodge Ball (Individual)			x	x					169S, 264MM
*Do this, Do that	x	x	x						75B, 208S, 123AM
*Drop the Handkerchief	x	x	x						80B, 28S, 235MM
*Duck on the Rock (Stake Guard)				x	x	x	x	x	81B, 186B, 90S, 269NV, 235MM
Dumb Crambo						x	x	x	219B
Dumbell Tag				x	x	x			83B
**End Ball—Boys and Girls 5-6				x	x	x	x	x	56A, IB,157S, 153NV, 495MM
Find the Object (Magic Music) (Find the Thimble)	x	x	x						104B, 58S, 28S
**Fist Ball—Boys and Girls 4-5				x	x	x			376B, 372MM
*Flowers in the Wind		x	x						87B, 28S, 96NV, 262MM
Follow Chase (Tag)			x	x	x	x			88B, 45AM
*Follow My Leader			x						89B, 92S, 125NV
*Foot and Half (Leap Frog) (Bombay) (One & Over)					x	x			127B, 171B, 158S, 172S
Forcing the City Gates							x	x	89B
Fox and Geese	x	x	x	x	x	x			92B, 315NV, 233MM
Fox Trail						x	x	x	95B, 93B
*Frog in the Middle (in the Sea)			x						96B, 29S, 245MM
*Garden Scamp		x	x						97B, 30S, 120AM, 237MM
**Giant (Cage) Volleyball—Boys and Girls 5-6					x	x	x	x	Sp. II, 369MM
**Goal Kick Ball—Boys and Girls 3-6			x	x	x	x	x	x	160S
*Going to Jerusalem		x	x	x	x	x			98B, 140F, 224MM
Ground Ball					x	x			97S, 493MM
Hare and Hound				x	x	x			107B, 96NV
*Have You Seen My Sheep?		x	x						102B, 30S, 114AM, 236MM
Hide and Seek	x	x	x						59S
High Windows	x	x	x	x	x				32S, 103B
*Hill Dill (Blackman)	x	x	x						105B, 159F, 268MM
Hop Scotch		x	x						119MM
Huckle Buckle Bean Stalk	x	x							109B
Huntsman (Hunting Tag)	x								166S, 90NV, 221MM
Indian Club Guard (Tower Guard) (Stool Ball)					x	x			406B, 233S, 232NV, 490MM
**Indoor Baseball—Boys 5-8, Girls 6-8					x	x	x	x	Sp.
*I Say, Stoop	x	x	x						113B, 61S, 109F
I Spy	x	x	x						113B, 228MM
*Jack Be Nimble	x	x	x						114B, 32S, 90NV, 113AM

ALPHABETIZED AND GRADED LIST OF GAMES FOR ELEMENTARY BOYS AND GIRLS—*Continued*

	1	2	3	4	5	6	7	8	Reference
*Jacob and Rachel	x	x	x	x	x				115B, 61S
Japanese Tag			x	x	x	x			116B, 250MM
Jumping Rope	x	x	x						118B, 47AM
*Jump the Shot						x			122B, 259MM
**Keep Away (Keep the Ball)—Boys 5-8, Girls 6-8					x	x	x	x	103S, 270NV, 487MM
**Kick Baseball—Boys and Girls 4-5			x	x	x	x	x		80A, 147NV, 322MM
Kickover Ball (Girls)							x	x	321NV
*Lame Fox and Chickens			x						124B
*Last Couple Out					x	x			125B, 270NV, 239MM
*Last Man					x	x			126B, 32S, 230MM
Line Club Bowls (Single or Double)					x	x			86S, 385B, 386B
**Line Soccer (Corner Kick Ball)—Boys 3-5, Girls 3-5			x	x	x	x			107S, 68W, 403MM
**Long Base—Boys and Girls 4-5				x	x	x	x	x	87A, 155NV
*The Lost Child	x								130B
Magic Carpet (Magic Circles) (Poison Areas)	x	x	x						37S, 91NV
**Mass Basketball—Boys 6					x	x	x	x	175S
Merry Christmas	x	x							82EC
*Midnight	x	x							34S, 97NV, 110AM
**Newcomb—Boys 4-5, Girls 4-5				x	x	x			58A, 178S, 492MM
New York (New Orleans)	x	x	x	x					35S, 265MM
**Nine Court Basketball—Girls 7-8							x	x	113S, 282NV, 506MM
*Numbers Change (Exchange) (All Change)				x					139B, 65S, 220MM
Paired Hot Hand (Hot Hand)—Boys only				x	x				65S, 166S
*Partner Tag (Couple Tag) (Join Right Hand)					x	x			56S, 145B, 223S, 242MM
Pig in the Hole						x	x	x	397B, 351NV, 225MM
*Pincho					x	x			146B, 247MM
**Playground Baseball—Boys 5-8, Girls 6-8				x	x	x	x	x	Sp.
Poison					x	x	x	x	148B, 37S, 315NV, 258MM
*Poison Snake				x	x	x	x	x	149B, 224S, 351NV, 259MM
*Pom-Pom-Pullaway				x	x	x			149B, 66S, 156F, 268MM
*Prisoners' Base (Dare Base)			x	x	x	x	x	x	118S, 156-8B, 275MM
*Puss in the Corner	x	x	x						163B, 37S, 28F, 222MM
**Quadruple Dodge Ball—Boys 4-5, Girls 4-6				x	x	x	x	x	51A
Railroad Train	x	x							164B, 91NV
Rope Skip Elimination				x	x	x			117-22B
**Rotation Soccer—Boys and Girls 5					x	x			17-38, 199NV
Round Ball					x	x			401B
Run for Your Supper (Goal Race)	x	x							217MM
Run, Rabbit, Run	x	x							122S?, 91NV, 261MM
Schoolroom Bowling					x	x			92A, 118EC
*Shadow Tag	x	x	x	x	x	x			173B, 67S, 250MM

ALPHABETIZED AND GRADED LIST OF GAMES FOR ELEMENTARY BOYS AND GIRLS—*Continued*

	1	2	3	4	5	6	7	8	Reference
*Simon Says	x	x	x	x					235B, 170NV
**Simplified Soccer				x	x	x	x	x	245NV, 413MM
*Slap Jack (Filling the Gap) (Herr Jack)	x	x	x	x	x				178B, 58S, 40S, 111AM, 235MM
**Soccer—Boys and Girls 7-8					x	x	x	x	Sp.
**Speedball—Boys and Girls 7-8							x	x	Sp., 415MM
Spider and Flies	x	x							41S, 98NV, 262MM
*Spud				x	x	x			404B, 255MM
*Squat Tag (Stoop Tag)		x	x						190B, 42S, 126NV, 247MM
Squirrel and Nut	x	x							184B
*Squirrels in Trees	x	x							185B, 42S, 91NV, 110AM
*Stealing Sticks (Gathering Sticks) (Raiding the Castle)				x	x	x	x		188B, 127S, 168NV, 279MM
Steps (Red Light)			x	x					188B, 38S, 119AM, 249MM
*Still Pond—No More Moving (Still Water—Stop)			x	x					69S
*Streets and Alleys (Maze Tag)				x					131B, NV, 234MM
Sun Dial			x						190B
*Swat to the Right (Whip Tag) (Beater Goes Around)				x	x	x	x		205B, 229S, 316NV, 219MM
*Tag Ball (Center Catch Ball) (Circle Keep Away) (Touch Ball)					x	x			230S, 355B, 231NV
*Teacher and Class (Leader Ball)	x	x	x						316B, 33S, 90NV, 113AM
*Third Man (Similar to Nest Tag)							x	x	112S, 194B
*Third Slap			x	x					195B
*Three Deep				x	x				196B, 243S, 200F, 241MM
*Tommy Tiddlers Land (Stone) (Puss in Circle)		x	x						197B, 164B, 97NV
Tug of War					x	x			60B, 146S?, 145MM
**Volley Ball—Boys 5-8, Girls 6-8					x	x	x	x	Sp.
Water Sprite	x	x	x						203B, 44S
*Weather Cock		x	x						133S, 204B
*Wee Bologna Man	x	x	x						204B
*Wood Tag	x	x	x	x	x	x			209B, 117AM, 146MM

NOTES:

All games are recommended by at least four references.

* Single asterisk is to indicate games that were recommended by seven or more references.

** Double asterisk indicates team games.

x Underscored indicates most suitable grade in which to teach game.

SYMBOLS FOR REFERENCES:

"A" refers to Anderson's *An Athletic Program for the Elementary Schools.* A. S. Barnes, 1929.

"B" refers to Bancroft's *Games for the Home School Playground and Gymnasium.* Macmillan Company, 1909.

"AM" refers to Anderson and McKinley's *An Outline of Physical Education for the First and Second Grades.* A. S. Barnes, 1930.

"EC" refers to Elnore and Carnes' *Educational Story Plays and Schoolroom Games.* A. S. Barnes and Co., 1926.

"F" refers to Forbus' and Allen's *The Book of Games for Home, School, and Playground.* J. C. Winston Co., 1927.

"MM" refers to Mason and Mitchell, *Active Games and Contests.* A. S. Barnes and Co., New York, 1935.

"NV" refers to Neilson and VanHagen's *Physical Education for the Elementary Schools.* A. S. Barnes and Co., 1932.

"S" refers to Staley's *Games, Contests, and Relays.* A. S. Barnes and Co., 1932.

"SpH" refers to Spalding's *Handbook* No. 115R.

"Sp" refers to A. S. Barnes' *Official Rule Books.*

"W" refers to Wild and White's *Physical Education.* Iowa State Bulletin, Iowa State Teachers College, 1924.

THE RELATION OF INTELLIGENCE TO THE LEARNING OF FUNDAMENTAL MUSCULAR SKILLS

A Comparative Study Involving Fifth and Sixth Grade Boys and Girls of Superior, Normal, and Sub-Normal Intelligence*

LOUIS KULCINSKI, Ph. D.
Director, Department of Health and Physical Education, Texas College of Arts and Industries
Kingsville, Texas

For many years a difference of opinion has existed regarding the relation of intelligence to motor learning. Similar differences exist as to what constitutes motor ability, mental-motor relationships, and fundamental muscular skills. These diverse opinions result from studies in which only one isolated skill was used as a measure, and these frequently limited to one type of activity. For example, goal shooting in basketball. A few studies used one or two combinations of isolated skills in a specific type of activity. Other studies combined several factors of skill such as power, strength, agility, and balance in more than one type of activity; no single item of which could be accurately measured without the influence of some one or combination of other factors taking place. All studies seemed to overlook the one vital consideration—total body mechanics—which involves the whole personality, and includes consideration of not only the physical, but the mental-motor, physiological, psychological, and instructional factors, together with their variable and uncontrolled relations and reactions. Basically, the acquisition of skills is essential to the development and improvement of total body mechanics.

The acquisition of fundamental muscular skills has been frequently stressed as one of the most important aims in education. In spite of the general recognition by school men of physical education objectives, and the use of many techniques designed to aid in the attainment of these goals, tools for measuring skills have been few and inadequate. Especially limited have been those tests of the individual in the practical class room situation.

As the study developed, it appeared that the results would magnify the importance of the relationship existing between various degrees of intelligence of fifth and sixth grade boys and girls and the ability to learn fundamental muscular skills to the extent of summarizing the location and definition of the problem into ten additional purposes of the study: (1) to show the prevalence of studies pertinent to the problem with negative, positive, and corroborative results; (2) to point out and emphasize the important changes in viewpoints; (3) to suggest the acceptance of a general term which might apply to motor activity; (4) to project the use of fundamental muscular skills as total body mechanics; (5) to determine whether fundamental muscular skills have predictive value; (6) to corroborate the summarized results of this study with the results of similar studies reviewed; (7) to develop a teaching procedure; (8) to summarize the statistical treatment of the results and to make obvious the comparative relationships existing in the problem; (9) to ferret out hidden relationships and to suggest subsidiary problems for further study; and (10) to set up a technique of procedure for the subsidiary problems which were raised in anticipation that they will add to the completeness of this study.

Selection of the problem. Does any relationship exist between various degrees of intelligence of fifth and sixth grade boys and girls and the ability to learn selected fundamental muscular skills? Since the mind and body cannot function independently, and since skills are a part of coordination, it seemed interesting to know if such a relationship existed, and if so, could it be shown or measured.

The purpose of the study. The primary purpose of this study is to determine, so far as possible, the effectiveness of superior, normal, and sub-normal intelligence quotients of fifth and sixth grade boys and girls in learning selected fundamental muscular skills when the same material is presented. The major consideration is the degree of mastery of twenty-two tumbling exercises commonly used and considered fundamental muscular skills as determined from analysis of other sources and supported by a previous study.

Definition of terms. What constitutes fundamental muscular skills? From the analysis of the literature reviewed, there appears to be a trend of opinion that mental-motor relationships and motor capacity, ability, and achievement are better defined as fundamental muscular skills. Fundamental muscular skills are those coordinations resulting from total body mechanics which are directed by the mind, and influenced by the body, its structure and functions. It includes that something—the fourth dimension in a human being which turns failure into success. It appears that a parallel exists for physical education in general, and for skills in particular. So long as there remains a

* A brief summary of dissertation.

mental-motor relationship with corresponding variables, just so long will there be a problem of correlation, all the more complicated and variable by the multiplicity of the interrelated effects of subsidiary variables pertinent to each.

In the final analysis, fundamental muscular skills includes coordination which becomes an affair of the whole organism; a relationship of mind and body or total body mechanics. Coordination is that quality of an individual which enables him to integrate all the powers and capacities of his whole personality into effective performance of his total body mechanics, which in this study is synonymous with fundamental muscular skills.

Questions raised in the problem. The questions raised in the problem are as follows: (1) Does any relationship exist between various degrees of intelligence of fifth and sixth grade boys and girls and the ability to learn fundamental muscular skills? (2) What is the degree of learning between various degrees of intelligence of fifth and sixth grade boys and girls and the ability to learn fundamental muscular skills? (3) Is there any significant difference between sexes in learning fundamental muscular skills? (4) Is there any significant difference between sexes in learning the more difficult test exercises? (5) Does ability in a battery of simple skills enable one to learn a battery of more difficult skills more easily, and do these batteries of tests have predictive value?

Equating the groups. In an experiment of this nature, it is desirable to have groups with an equal amount of training or lack of training. A preliminary inquiry was made to ascertain the amount of training. Fortunately, none of the subjects in this study had had any previous training in any of the test exercises used. In order to eliminate some of the disturbing factors which might influence the results, an attempt was made to equalize the groups in tumbling skill ability by teaching a preliminary battery of ten simple and fundamental test exercises which contained similar coordinations, movements, anatomical positions, and mechanical laws as those in the twenty-two more difficult test exercises used in the final battery.

Detailed statement of procedure. Each group was given an initial test of a preliminary battery to determine the present objective performance which for this study is called POP. This battery consists of ten simple but fundamental tumbling exercises. The order of difficulty was arbitrarily arranged according to past experience; forward roll, backward roll, pirouette, snap-to-stand, knee jump, cross leg stand, foot jump, duck walk, spider walk, and crab walk. An initial test was given for which two trials were allowed for each exercise, taken without instruction or practice to determine a raw score, the result of which in this study is called POP-1 (preliminary objective performance) score. After this score was obtained, instruction followed with ten practices for each exercise. Then an end test was given to obtain a POP-2 (preliminary objective performance) score. The difference between the two scores determined the degree of learning. An order of difficulty for this battery was determined on the basis of success or failure of this group of cases.

After the ten simple exercises of the POP battery were given to equate the groups in skill ability, a second battery was given to each group. An initial test of a final battery was given to determine the final objective performance score which for this study is called FOP. This battery consisted of twenty-two more difficult and fundamental tumbling exercises. The order of difficulty for the teaching purpose of the course content was arranged according to the results of a previous study: high dive, long dive, squat stand, neck dive, head stand, cartwheel, round-off, elbow stand, hand spring, head spring, elbow lever, bucking broncho, neck spring, snap-up, front bender, forearm stand, front somersault, hand walk, back somersault, hand stand, back hand spring, and back bender. An initial test was given for which two trials were allowed for each exercise, taken without instruction or practice to determine the FOP-1 (final objective performance) score. After this score was obtained, instruction followed with sixty practices for each exercise. Then an end test was given to obtain an FOP-2 (final objective performance) score. The difference between the two scores determined the degree of learning. A rearranged order of difficulty was determined on the basis of success or failure of this group of cases.

Successful performance of each test exercise of each battery depended upon the performance of three specific objective requirements determined by the observer as criteria for success. These requirements, basically the same for all-test exercises, were from a stand to a stand, within a restricted area bounded by lines or circles, and for a specified time, or as in a few instances for a specified distance or a specified number of repetitions. If the subject was successful on the first trial of an exercise, he was excused from taking a second trial, i. e., success was assumed on trial two.

The sample groups were given an additional objective requirement in the form of three elements, but did not receive instruction in them. Initial and end tests were given on the preliminary and final batteries, the scores of which are designated as PEOP (preliminary elements objective performance) score, and FEOP (final elements objective performance) score. The PEOP-1 scores and the FEOP-1 scores, respectively, are the initial tests of the preliminary and final batteries. The PEOP-2 scores and FEOP-2 scores, respectively, are the end tests of the preliminary and final batteries.

The differences between the PEOP-1 and PEOP-2 scores, and the FEOP-1 and FEOP-2 scores determine the degree of learning.

Criteria of scoring and measurement. Two types of scoring were used to conveniently fit in with the three avenues of measurement used to show the results. Pass or fail, the standard type of scoring, was used with the Chi Square Test for observed associations to answer the general and specific questions raised in the problem, and to make comparisons of individual tests and group scores.

The increment point value, two points for first trial successes and one point for second trial successes, was used with the Pearson product-moment method of calculating correlations to make total population comparisons with total scores.

The pass and fail type of scoring and the increment point type of scoring were both used in the illustrative materials to show indicative trends between individuals, quartiles, groups, and individual and sample group case studies on a comparative basis of descending sequences of total point scores and total exercises passed which was parallel to the ranked intelligence quotients.

The degree of learning was measured by the difference between the total number of exercises passed and the total number of points scored in the initial and end tests of the preliminary battery score, POP-1 and POP-2 (preliminary objective performance), and the initial and end tests of the final battery score, FOP-1 and FOP-2 (final objective performance).

Controlled variables. As the details for the experiment developed, it seemed advisable to include, in addition to the intelligence quotient, sex, tests, and requirements, a second set of controlled and objective requirements. Three elements, or component parts, of the test exercises were used as such additional requirements with a sample group. The six boys and girls in Group IV-A and IV-B mentioned below in the tabulated summary were selected for the sample groups. The sample groups were used as a case study for the experiment.

Each exercise of the two batteries was broken down into three basic elements, or component parts, based upon the positions through which the body must pass for the successful performance of the tests. The sample groups received no special instruction on the elements, and were given an initial and an end test on the two batteries. The three elements were additional requirements which made the tests more difficult and objective and consequently, more valid. The subjects in these groups were used for case study.

Uncontrolled variables. The experiment was conducted with the aid of three practice teachers from the physical education major course assisting with each group; two assisted in teaching and the third recorded, checked results, and noted the observations made by the experimenter. From the general observations made, and individual case studies, disturbing factors as additional uncontrolled variables were revealed. Teaching aids, both verbal and demonstrative, were interspersed with personal assistance from both practice teachers and the experimenter. Other uncontrolled factors which may have affected the results were the children's attitude toward tumbling, the element of fear and other emotions, the children's health, the weather conditions and atmospheric pressure, the possible transfer of coordinations from other skills, the limitations of teaching each group the same each day, the effect and amount of visual practice, and the effect of testing upon the individual.

The tests. The construction of the tests was checked item for item with the methods of test construction suggested by Charles H. McCloy.[1] The tests satisfied his criteria. The selection of the test items for the study of the relation of intelligence to the learning of fundamental muscular skills was based upon the following conditions: (1) little or no equipment was necessary, the tests may be administered on lawns by using lime for the marking of the lines, lanes, and circles; (2) forty per cent of the subjects were able to pass forty per cent of the test exercises in the initial test of the preliminary battery, and seventy-five per cent of the subjects were able to pass sixty-three per cent of the test exercises in the end test of the preliminary battery, while in both batteries performance was possible at the difficult end of the range; (3) the tests in both batteries were readily scored by objective measures; and (4) the tests in the preliminary battery contributed to the skill necessary in the final battery, and both batteries contributed to the skill of the subject as he practiced the specially selected tests, thus having a carry-over value.

The criterion selected for the study was the POP (preliminary objective performance) battery of tests which produced a raw score, resulting from the fact that none of the subjects had had any previous training in the special type of skills being tested as revealed by the preliminary inquiry on training. The score on the initial test of the preliminary battery was used as the basis for all correlations, and for the illustrated indicative trends.

Validity and reliability of the tests. Both the validity and reliability of the tests are indicated by the fact that they had been in general use throughout the ages as revealed by the historical sketch. It was found that eighteen of the thirty-two tests used in this study had been used up to 1780, and some of these dated as far back as 2500 B. C. The remaining fourteen tests were found in the more

[1] Charles H. McCloy, *Tests and Measurements in Health and Physical Education*, Chapter XXV, pp. 306-315, New York: F. S. Crofts and Company, 1942.

recent publications, since 1780 and up to the present time.

In order to obtain a check on the reliability of the test exercises used in the two batteries of tests, a comprehensive study was made of the literature on tests and measurements in which tumbling and stunt type tests were used. Most of the tests in the two batteries used in this experiment had been used in studies conducted by Louis Kulcinski[1], Oliver Langhorst[2], Granville Johnson[3], Charles H. McCloy[4], Gertrude Barton[5], Hazel Rhodes[6], Clarence Koob[7], Eleanor Metheny[8], Carl Johannsen[9], and David Brace[10]. The tests of both batteries had been proved valid and reliable by the results of these studies.

A sample of the validity of the criterion, the initial test of the POP (preliminary objective performance) battery, is indicated by the relationship between the first and second trials. For the superior I. Q. boys (Group I), Chi Square yielded a significantly higher number of passes than failures on the entire test (POP-1), the criterion before training. For the total population Chi Square yielded 21 between POP-1, the criterion before training, and POP-2, the criterion after training.

The following is a check list of the ten test exercises of the POP (present objective performance) battery. Five of the ten exercises, forward roll, backward roll, pirouette, knee jump, and crab walk, were referred to specifically by name in historical references which also indicates their validity and reliability. The crab walk, one of the three walking exercises used in this study, and found in the historical research, was not used in any of the studies reviewed. Six of the ten exercises in the check list, forward roll, backward roll, pirouette, knee jump, cross leg stand, and foot jump, were used in eight other studies and have been accepted as valid and reliable. The three moving test exercises were the only tests of this study that had not been used in previous studies.

Check List for the test exercises of the POP (preliminary objective performance) battery. The numbers marked with the symbols # refer to the test numbers of the authors in their respective columns.

	Historical Sketch	Brace	McCloy Iowa Revision	Johnson	Koob	Metheny	Barton	Rhodes	Johannsen
1. Forward roll	x			#5	x	x	x	x	x
2. Backward roll	x			#7	x	x	x	x	x
3. Pirouette	x	#7	#8	#10	x	x	x	x	x
4. Snap-to-stand									
5. Knee jump	x	#16	#16						
6. Cross leg stand		#17	#7						
7. Foot jump		#10	#21						
8. Duck walk									
9. Spider walk									
10. Crab walk	x								

[1] Louis Kulcinski, "What is the Comparative Effectiveness of the Formal, Informal, and Combination Methods When Instructing University Freshmen in Fundamental Muscular Skills?" Unpublished Master's thesis, University of Illinois, Urbana, Illinois, 1929, pp. iv and 73.

[2] Oliver Martin Langhorst, "An Experimental Study of the Use of Grading as an Incentive in the Performance of Certain Muscular Skills." Unpublished Master's thesis, University of Illinois, Urbana, Illinois, 1934, pp. iv and 41.

[3] Granville B. Johnson, "Physical Skill Tests for Sectioning Classes in Homogeneous Units," *Research Quarterly of the American Physical Education Association,* III (March, 1932), pp. 128-136.

[4] Charles Harold McCloy, "An Analytical Study of the Stunt Type Test as a Measure of Motor Educability," *Research Quarterly of the American Association, for Health and Physical Education,* VIII (October, 1937), pp. 46-55.

[5] Gertrude Barton, "A Comparative Study of the Brace Type of Test and the Johnson Type of Test as Measures of Motor Educability in the Junior High School Girl." Unpublished Master's thesis, University of Iowa, Iowa City, Iowa, 1936, pp. 28.

[6] Hazel Marie Rhodes, "A Comparative Study of the Brace Type of Test and the Johnson Type of Test as Measures of Motor Educability in the Senior High School Girl as Shown by Two Selected Criteria." Unpublished Master's thesis, State University of Iowa, Iowa City, 1936.

[7] Clarence Koob, "A Study of the Johnson Motor Skills Test as a Measure of Motor Educability." Unpublished Master's thesis, University of Iowa, Iowa City, 1937, pp. 21.

[8] Eleanor Metheny, "Studies of the Johnson Test as a Test of Motor Educability," *Research Quarterly of the American Physical Education Association,* IX (December, 1938), pp. 105-114.

[9] Carl Johannsen, "A Study of the Relationship of General Motor Capacity to Ability in Tumbling." Unpublished Master's thesis, University of Iowa, Iowa City, Iowa, 1933, pp. iii and 30.

[10] David Brace. Measuring Motor Ability, A Scale of Motor Ability Tests. New York: A. S. Barnes and Company, 1927, pp. xvi and 138.

Tabulated summary. The following is a summary in outline of the chapter on the collection and classification of the experimental data on the relation of intelligence to the learning of fundamental muscular skills.

Experimental Groups	Sex	Number of subjects	Intelligance level	I. Q. range
I-A	Boys	20	Superior	123 to 103
I-B	Girls	20	Superior	125 to 105
II-A	Boys	20	Normal	101 to 80
II-B	Girls	20	Normal	107 to 84
III-A	Boys	14	Sub-normal	74 to 45
III-B	Girls	11	Sub-normal	74 to 41
Sample Groups used as case studies for the experiment.				
IV-A	Boys	6	2 Superior	123 and 119
			2 Normal	101 and 101
			2 Sub-normal	74 and 73
IV-B	Girls	6	2 Superior	125 and 120
			2 Normal	107 and 107
			2 Sub-normal	74 and 72

The following page is a check list of the twenty-two test exercises of the FOP (final objective performance) battery which have been used in several previous studies. Their validity and reliability are indicated by the high positive correlations between criterion and the tests, as found in the results of previous studies. It should be noted that thirteen tests of this battery are also valid and reliable through general use as indicated by historical references.

The results of Oliver Langhorst who used the same twenty-two tests of the final battery showed a correlation of .929 with a probable error of .028 in correlating his work with that of Louis Kulcinski, seven years later. Carl Johannsen used thirteen of the twenty-two tests of the final battery and had a positive correlation of .41 with the Brace Test, four of which were used in the preliminary battery, and the stunt score of his battery. Clarence Koob obtained a correlation as high as .969 between the Johnson test, three of which were included in the preliminary battery, and the criteria of ten stunts, six of which were included in the final battery of this study. Eleanor Metheny used the same data of Clarence Koob and found a correlation of .977 with the total Johnson score and .934 against the criteria which used four of the above POP (preliminary objective performance) tests.

Check list for the test exercises of the FOP (final objective performance) battery.

	Historical Reference	Kulchinski	Langhorst	Johannsen	Koob	Metheny
1. High dive	x	x	x			
2. Long dive	x	x	x	x	x	x
3. Squat stand		x	x	x	x	x
4. Neck dive		x	x			
5. Head stand		x	x		x	x
6. Cartwheel	x	x	x	x	x	x
7. Round-off	x	x	x	x		
8. Elbow stand	x	x	x			
9. Hand Spring	x	x	x	x		
10. Head spring		x	x	x		
11. Elbow lever		x	x	x		
12. Bucking broncho..		x	x			
13. Neck spring		x	x			
14. Snap-up		x	x	x		
15. Front bender.....	x	x	x			
16. Forearm stand ...		x	x		x	x
17. Front somersault..	x	x	x	x	x	x
18. Hand walk	x	x	x	x		
19. Back somersault ..	x	x	x	x		
20. Hand stand	x	x	x			
21. Back hand spring.	x	x	x	x		
22. Back bender	x	x	x	x		

Avenues of measurement. The Chi Square Test for chance or statistical significance is used for the standard type of scoring, the number of exercises passed or failed, and is used to show observed associations between the experiment and sample groups; superior, normal, and sub-normal.

The Pearson "product-moment" method is used for the increment point scoring, two points for first trial successes and one point for second trial successes, and is used to show total population comparisons with total accumulated scores for boys and girls combined and boys and girls separately with and without sub-normal boys and girls.

Illustrative materials are used to show indicative trends for profile comparisons. Total points scored and total number of exercises passed are given for individual high scorers of the two highest I. Q. subjects in each group, individual quartile high scorers, quartile totals, and group totals for experiment and sample groups.

Retention test. The survey of literature did not reveal any studies measuring the amount of retention; neither did it show any studies dealing with the amount forgotten in motor skill learning. After the lapse of one year, a retention test was given to the subjects of this study. The test was given on the exercises passed by each subject in the end tests of the POP and FOP batteries. A demonstration, to serve as a recall, was given for each exercise, and one trial without practice was allowed each subject. Unfortunately, only about fifty per cent of the subjects were available for the test.

Summary of Conclusion

Specific conclusions. The results of this study on the relation of intelligence to the learning of fundamental muscular skills shows positive conclusions. The group comparisons show a significant degree of learning by the superior group over the normal and sub-normal groups; marked superiority of the normal groups over the sub-normal groups; and a high degree of superiority of the superior groups over the sub-normal groups. The results of the sample groups confirm those of the experiment groups.

General conclusions. The general conclusions drawn from the evidence collected from the subjects studied in this experiment and as analyzed through the three avenues of comparison, is as follows: a definite and positive relationship exists between various degrees of intelligence of fifth and sixth grade boys and girls and the learning of fundamental muscular skills, and this relationship can be measured.

Contrary to general opinion and the results found in other studies, girls in the superior and normal groups are better able to do tests involving strength and endurance and balance, coordination, and agility than are the boys.

Question one. Does any relationship exist between various degrees of intelligence of fifth and sixth grade boys and girls and the ability to learn fundamental muscular skills? High positive relationships exist between I. Q. and the ability to perform fundamental muscular skills. With few exceptions, the three avenues of comparison show consistent and parallel results.

Question two. What is the degree of learning between various degrees of intelligence of fifth and sixth grade boys and girls and the ability to learn fundamental muscular skills? The results of the experiment groups show the following conclusions: the normal groups learn more than the superior groups in the simple battery; the normal and superior groups have an equal advantage over the sub-normal groups in learning exercises of the simple battery; the normal and superior groups have a significant advantage over the sub-normal groups in the difficult battery; and the superior groups have a slight advantage over the normal groups in the difficult battery.

Question three. Is there any significant difference between the sexes in learning fundamental muscular skills? Girls are superior to boys in almost all items measured and compared. The results on the basis of total number of exercises passed show that: there is no difference between the sexes in the simple battery, before training; a definite tendency favoring the girls in the superior group appears in the simple battery, after training; the girls are definitely superior to the boys in the difficult battery, after training; except for the sub-normal girls, the results are significant. The significance is more pronounced and conclusive when considering the net total number of exercises learned.

Question four. Is there any significant difference between sexes in learning the more difficult test exercises? The general indications are that girls are superior to the boys in learning the hardest exercises of both batteries, except in the sub-normal groups in which the girls are inferior to the boys. The results of the sample groups confirm those of the experiment groups which increase the significance of the conclusions.

Question five. Does ability in a battery of simple skills enable one to learn a battery of more difficult skills more easily, and do these batteries have predictive value? The tests have a decidedly high positive predictive value, and all indications are that I. Q. and fundamental muscular skill ability are relatively constant.

Retention test. The retention test shows that: after a lapse of one year, the girls learn more, forget more, and retain less than the boys, except for the sub-normals who forget less of the difficult exercises; and the brighter the subjects are the more they learn, the more they forget, and the more they retain.

APPENDIX—A

POP Tests—Preliminary Battery

Description of the Exercises

1. Forward roll. From a standing position, bend the knees deep and place the hands in front of the feet. Straighten the legs, bend the arms and place the nape of the neck on the mat. Push off by extending the toes, double to a ball and tuck, and roll forward to a stand.
2. Backward roll. From a standing position, bend the knees deep, sit close to the heels, and roll backward, body relaxed with the knees and head close to the chest. Place the feet on the mat over and close to the head and push off to a stand.
3. Pirouette. From a standing position jump into the air, do a complete turn (pirouette) left or right. Alight on both feet, and hold the balance.

4. Snap-to-stand. From a front lying position, jump to a stand replacing the hands with the feet and touching the line and holding the balance.
5. Knee jump. From a kneeling position with toes extended and resting on the insteps, jump to a stand on both feet and hold the balance.
6. Cross leg stand. From a stand with arms folded in front, cross the legs and sit down close to the feet. Rise to a stand without unfolding the arms or shifting the feet, and come to a stand, holding the balance.
7. Foot jump. From a standing position grasp the toes of either foot with the opposite hand in front of the body. Jump into the air and over the foot so held without letting go. Come to a stand and hold the balance.
8. Duck walk. From a position with the arms between the legs, knees bent, elbows locked with the knees, grasp the ankles from the outside with the corresponding hands and walk forward and backward.
9. Spider walk. From a stooped position on all fours with the arms and legs straight walk forward and backward.
10. Crab walk. From a sitting position with the hands placed on the mat in rear of the hips, raise the hips off the floor and walk forward and backward.

APPENDIX—B

FOP Test—Final Battery

Description of the Exercises

1. High dive. Take off from both feet after a short run. Spring over an object finishing with a forward roll on the far side. Ease the body to the mat on the arms, "duck" the head and roll forward. Avoid a right angle descent.
2. Long dive. Short run to get momentum. Take off from both feet. Dive forward upward, finishing with a forward roll as in the high dive. Avoid a low dive. Aim to get distance.
3. Squat stand. Place the hands on the mat with the fingers directed forward. Raise the hips, placing the knees upon the corresponding, slightly bent elbows. Knees are slightly bent. Balance in this position without touching the toes to the mat. Shoulders should remain forward of the hands.
4. Neck dive. Dive forward from both feet and finish with a forward roll, with the hands placed at sides. Begin the roll high on the back of the neck with the head "ducked" forward.
5. Head stand. Hands placed shoulder-distance apart (fingers forward) with the head ten inches forward on the mat forming a good triangular base. Raise the hips and extend the thighs. (Back normally arched. Legs straight. Feet together. Toes pointed. Balance should be controlled by the arms. Avoid standing on the top of the head. Aim to stand straight and steady.)
6. Cartwheel. This exercise may be done with either the left or the right hand leading. If the right hand leads execute as follows: Place the right hand (fingers backward) close to the right foot. Raise the left leg sideward upward. Place the left hand opposite the right. Raise the right leg sideward upward. At this point the performer should resemble a figure X with both feet above the head, legs apart and straight, back normally arched, head up, and arms straight. Finish the movement by placing the left foot near the left hand, raising the right hand, then placing the right foot on the mat and finally raising the left hand. Aim to do the cartwheel in a straight line.
7. Round-off, left (or right). Face the length of mats with the left (right) foot slightly forward of the right (left) foot. Place the left (right) hand, with fingers directed back, on mat near the side of the left (right)foot. Extend the right (left) thigh vigorously. Follow this extension with the extension of the left (right) thigh. Pivot half left (right) on left (right) arm placing right (left) hand opposite the left (right) hand. Flex both thighs, push from both hands and finish in a stand or do any other stunt in which the movement is backward.
8. Elbow stand. This exercise is done by balancing on the head and forearms. The elbows should not be placed too far apart. (Body form corresponds with that of the head stand.)
9. Hand spring. After a short run, hop from one foot to the same foot placing the other foot forward (about 10-12 inches) and raise the arms to a front verticle position. Vigorously lower the trunk placing the hands on the mat close to the forward foot. Fingers directed forward and arms straight. Extend the leg which is back, then the other to an arched back. Finish on both feet about four feet from where the hands were placed. Try to finish with the knees almost straight. Keep the head back and arms straight.
10. Head spring. Place the head and hands upon the mat so that the head is either between the hands or slightly back of them. Flex the thighs (knees straight) as the hips are raised. Retain this flexion until the hips are well over the head. Extend the thighs vigorously as the hips begin to fall. Accompany this with an arch of the back and a vigorous bend forward.
11. Elbow lever. Place the hands close together on the mat (fingers directed back). Rest the body upon the elbows and balance; the body should be supported in a horizontal position.

12. Bucking broncho. Dive to a hand stand position with the knees bent. Extend the legs, flex the thighs and push from the hands to a stand. Dive immediately to a hand stand position with knees bent and return to a stand. Repeat these movements as often as desired.
13. Neck spring. This stunt is similar to the head spring. It is begun from a position with the feet over the head (thighs well flexed), hands placed behind the shoulders, and the body's weight resting upon the back of the neck. Hips moved forward followed immediately by vigorously extending the thighs and pushing from the hands. Aim to raise the hips as the thighs are extended.
14. Snap-up. The snap-up is a neck spring with the hands placed upon the thighs instead of behind the shoulders. Push on the thighs with the hands as the thighs are extended. The head must be pressed hard backward to substitute for the hands in the neck spring.
15. Front bender. Start from a standing position. Then stand on the hands. Without a definite stop, lower the feet over the head to the mat. Knees bent and shoulders as far back as possible. Keep the head back. Push from the hands to a standing position.
16. Forearm stand. Raise the head slightly off the mat from an elbow stand to do the forearm stand.
17. Front somersault. Spring upward from both feet with the arms raised in front. Trunk almost erect. Swing the arms downward as vigorously as possible, flex the thighs and legs, striking the ankles with the hands. Lower the head forward as hard as possible. Hold the "tuck" until the body has completed one turn forward. Finish by alighting upon both feet. Aim to get height, a good "tuck" and a fast turn. Keep the eyes open. Avoid distance when doing a front somersault.
18. Hand walk. Walk forward in a hand stand position. Take short steps and walk straight.
19. Back somersault. Spring as high as possible from both feet swinging the arms vigorously upward and backward. Flex the thighs and legs so that the knees reach the chest. "Throw" the head backward. Grasp the legs. Hold the "tuck" until the body has made one turn backward. Alight upon both feet. Get good height, good "tuck", and a fast turn. Keep the eyes open. Do not move backward too far from the starting point. Try to alight in the same spot.
20. Hand stand. Place the hands shoulder-distance apart on the mat (fingers forward). Shoulders slightly forward of hands at the start. Extend the thighs (one at a time) to a position with the feet directly above the head. (Back normally arched. Legs straight. Feet together. Toes pointed. Shoulders above the hands. Arms straight. Head up.) Balance is controlled by the hands.
21. Back hand spring. Start from a position with the feet slightly apart and parallel, knees slightly bent, trunk slightly forward, and arms lowered backward, upward as far as possible. Lose the balance backward, swing the arms vigorously forward, upward, extend the trunk and arch the back. "Roll" the hips forward. Place the hands upon the mat. The trunk and legs pass through a hand stand. Flex the thighs and push from the hands as the trunk and legs begin to descend from the hand stand position. Finish in a standing position. Avoid diving. Do not turn the head. Keep the arms straight.
22. Back bender. Begin from a stand. Bend the knees, arch the back, "roll" the hips forward, bend the head back, and raise the arms as high as possible above the head. Lower the hands to the mat. Flex one thigh with enough force to raise the body through a hand stand. Place the feet behind the hands and finish in the starting position.

PROBLEMS IN HEALTH INSTRUCTION

DOROTHY LA SALLE
Senior Specialist in Physical Fitness
U. S. Office of Education

The problems of health are based upon the fundamental patterns of American culture. They are so intertwined with large social issues that one must understand these issues in order to make an attack on health problems. They are, therefore, bigger than any one group, one institution, one agency, or one profession. They are as broad as life itself. Our traditions, our customs, our economic structure, our social institutions, our family background all affect health and in turn create problems for the school in health instruction. For example, our economic structure is closely interwoven with socialized medicine and the individual's ability to have medical service; with housing conditions and his ability to afford healthful living conditions. The family customs affect the individual's attitudes and practices regarding sleep and rest, diet, cleanliness and exercise. They strongly affect his mental hygiene. We could cite many more examples but these are enough, perhaps, to indicate how vast and how complex are the problems of health.

Problems in Administration

They lead me to my first large category: administrative problems; and under this I place: community organization for health. The community itself must see its own health problems, organize for a plan of action and see it through. Is it the school administrator's role to assume the leadership in community organization for health? Isn't that the health officer's job? If the community is not seeing its health problems, then I believe those individuals who see the problems most clearly, must help the others. The school administrator and his staff, the health officer and his staff, the parents, the physicians, the clergymen, the club leaders, must plan together and carry out the plan. Health instruction in the schools will be a part of the larger whole.

The second problem I would give you is administrative, also. Just as the community must see the relationship of health to total living in the community, so must the school see the relationship of health to total living in the school. The most satisfactory administrative procedure so far suggested for this purpose is the health committee or health council. Such a council is made up of faculty members, physician, nurse, and school custodian. The members of the faculty who most frequently serve are: home economics teachers, physical education teachers, science teachers and social studies teachers. Some of the duties of such a committee are to: (1) plan the total health program; (2) sensitize the school personnel to existing health problems; (3) work out with the faculty the contributions to healthful living of each subject area; (4) develop the health curriculum; (5) and work with the community health committee. The chairman of such a committee should serve as health co-ordinator and should be given adequate time in his schedule for these new and important duties.

Problems in Methodology

The second large category of problems I call: methodology. Our great challenge in health education is how to get young people to want to live healthfully. Motivation, then, becomes the first item for discussion under methodology. We must know what the fundamental motives of young people are and appeal to them. We know that children are interested in growing up, in playing better, in having fun, in being liked by their associates, in doing well in school. Every adolescent faces these major tasks: (1) making adjustment to his changing growth and physiological development; (2) becoming emancipated from family and free from emotional dependence upon them; (3) accepting his own characteristic sex role and adjusting to the opposite sex; (4) finding and entering a suitable vocation; (5) forging some philosophy which will give meaning and purpose to life. Motivation for healthful liivng lies in helping the young person understand and accept the relationships which health bears to his purposes. Does he wish to be popular? If he does, then the teacher's job is to guide him, to see that his skin, his posture, his energy all enhance his personality. Does he know that the amount of pep, enthusiasm, nervous control and courage in facing crises are indications of his health? We have not used these basic motives sufficiently.

The second item I have under methodology is: The problem approach. Psychology unquestionably points toward this method. It tells us that a felt need, goal, or problem is a necessary factor in all learning. The greater the need is felt, the closer it is to the inner self, the surer we can be that the learning will become a part of the self and the self changed in that respect. The problem is revealed as the inevitable central feature of the learning process. In discussing problem-solving some adults seem to think that the teacher must wait until the pupil is conscious of an inner urge. They argue that the pupil may never recognize that he needs to take care of his teeth until he has a toothache. Or others ask pupils what they would like to know about health and on that basis proceed with instruction. "Problem solving does not mean that the teacher must let the pupils muddle through while the teacher sits back. The teacher has positive responsibilities, i.e., to help select activities of educative value and to guide the process of organization," says Carleton Washburne. The problem may be suggested by the pupils or by the teacher. The important factor is that the pupils accept the problem as their own. Use of the problem-solving method is basic to sound health instruction. Modern educational psychology and educational philosophy point to no other method.

The last item which I have under methodology is that of work experience in the community. Certain systems have tried this very successfully. In addition to instruction in the classroom, the student works in the community in a hospital, in a health department, in a clinic, in a doctor's office, making home visits with a nurse, or in an elementary school classroom, helping the teacher weigh and measure. Michigan has used this type of course quite extensively and claims that students develop a greater interest in their own health practices by virtue of their experience in helping others. They discover there is much they need to know. In an experimental group of schools in Michigan, for instance, such a course was offered to senior girls in high school. Two 45 minute periods of classroom instruction were given and in addition each girl worked five hours each week in the local hospital.

Problems of the Curriculum

The third large category of problems which I wish to discuss with you is: curricular problems. Of all the many problems in health, which are

the most critical, which the most urgent? For the secondary school, sex delinquency is certainly an important one. This is tied up with many motives and perhaps sex demands are the least important. Becoming emancipated from the family is probably one important motive, wanting to feel grown up, wanting to be popular with the opposite sex. Working and having money to spend is another factor in sex delinquency. In some cities as high as ninety percent of high school students are working in addition to going to school. Inadequate recreational facilities and leadership are still other factors.

From the point of view of health instruction, I believe we should include units in sex education; in learning to understand ourselves; in what it means, psychologically and physiologically, to grow up. The venereal diseases should be included under the study of communicable diseases. You have all seen the statistics, I am sure, which show the great increase in venereal diseases. You all know of the great increase there has been of sex delinquency among girls under 20 and that large numbers of these are very young, twelve, thirteen, fourteen and fifteen. And you all know, too, that their offenses are primarily with men in uniform. Do you see the impact of this great social upheaval of the war on young girls? What have we done for our girls so far? Relatively little. All of the glitter, all of the glamour has been for the boy. And much of the constructive work by social workers has been for boys, not girls. In this one problem, then, we have mental hygiene which has been almost entirely omitted from the health curriculum, sex education and venereal disease, recreation, development of hobbies, and physical education.

Another great problem of the curriculum which the war has brought on is working while going to school. This means reduced hours of sleep, chronic fatigue, nervous tension, irritability and decreased resistance to infection. Think back to 1933. What was the great youth problem then? No work. Ten years later, what a revolutionary change.

The last big problems of the curriculum are nutrition and correction of defects. These are both listed in *Physical Fitness through Health Education* among the major objectives. These two highlight again for us the major premise with which we started: the problems of health are closely interwoven with basic patterns of American life. We must attack these, also, if we hope to raise the level of health of our Nation. The work must go on not only in the school but in the community also.

Finally, I would plead with you to make your health instruction functional. Try to reach the emotions of your young people. Throw them a challenge. Build the instruction around their problems and around their interests. If you do not you might as well stop, save your time and theirs. Basic interests of most young people are: (1) to get a job; (2) to get married; (3) to have a home; (4) to have children. If health instruction is to be translated into the lives of these young people we must help them see the interrelationship of health and of getting and keeping a job; of health and finding a mate; of continuous good health practices and having strong, healthy children.

We must show them that health is never an end but always a means for better living, for better accomplishing life's purposes. Then, I believe, we must take another step beyond the purely personal and help them to see the important role they play in building America. They must know that how every individual lives is a matter of deep concern to his fellow countrymen. Our lives are so interwoven, we are so dependent upon one another that the Nation can grow only as each one grows, only as each realizes his responsibility. In Nazi Germany, the strength of the nation depends upon Hitler. In the United States the strength of the nation depends upon the initiative, the resourcefulness, the fortitude, the responsibility, the high purpose and the health of each individual.

TEAMWORK IN THE HEALTH AND PHYSICAL EDUCATION PROGRAM FOR THE LOS ANGELES COUNTY SCHOOLS[1]

LLOYD E. WEBSTER
Director of Health and Physical Education
Los Angeles County Schools

Someone has said that education is suffering from the paralysis of analysis. If this is true, then we are consigned to just one more stroke. There is much paralysis in modern education, so I expect one more analysis will not in itself produce a cure nor a crisis.

It was during the year 1933 that a general restlessness and desire for change became evident throughout the United States. Laymen and some educational administrators began a movement to eliminate nonessentials and so-called frills in education. As a result subjects such as health education and physical education were put to sleep. In a remarkably short time an aroused group of patriots took up arms in defense of these programs. A na-

[1] Address given before the Los Angeles County School Health Council January 22, 1944.

tional committee was called into being. This group was composed of such outstanding personalities as: Jane Addams; Dr. Blaisdell, President of Claremont Colleges; Dr. Bogen, Superintendent of Schools, Chicago; Dr. Bundesen; Dr. Carr, President, A.M.A.; Dr. Coffman, President, University of Minnesota; Harry Emerson Fosdick; Dr. Givens, Superintendent of Schools, Oakland; Dr. Graham, President, University of North Carolina; Dr. Russell, Columbia University; Mr. Simon, Real Estate Board of New York; Dr. Stockman, Methodist Church; Norman Thomas; Dr. Rufus von Klein-Smid; Dr. Woolley, President, Mt. Holyoke College; Dr. Jesse Williams, President, American Physical Education Association.

Under the directorship of Dr. Jesse Williams this committee gave active support in favor of retaining health and physical education in the public schools of this country. This group comprised the first all-American team dedicated to the proposition that health and physical education must be retained, and that to neglect them would court serious social problems for the years ahead. Their arguments were strong, and they succeeded in preserving the seeds of the educational fruit we are enjoying these days.

The fact, however, that the problem ever came to an issue of national scope is a sign of weakness somewhere along the academic right of way. We are all aware that history has an annoying manner of repeating itself. Now, eleven years later, are we safe and snug from an attack such as broke over the national horizon in 1933? In other words, are our health and physical education programs defensible in an educational system? From my observations, I would say they are, generally speaking, as dry as tinder. All that is needed is a depression or a crusading group of "choppers" and the conflagration is on. The good work of the 1933 committee will then have been in vain; and you and I will be called upon to do it all over again.

Let us look back into the year 1933 and see what it was that touched off the spark. We may sum it up in a word—the depression. However, let us look a little deeper and see why it reached such pandemic proportions. The American people had been led to believe, and I feel are still believing, that health and physical education are of some importance to the school curriculum, but of necessity must be set apart and tacked loosely to the older and more traditional programs. This type of organization was satisfactory as long as education slumbered. However, when depression arrived education woke up and found it necessary to employ a new word—retrenchment. When this occurred, it did not take long for the professional "choppers" to cast their eyes upon the "appendages." As a result, health and physical education were all but eliminated as essentials to the curriculum. The opposition argued that the health responsibility for the pupil belonged to the parent; the function of the school was to educate, not to medicate. In physical education they said anyone can throw out a ball and bat and yell "play," so why pay for highly trained specialists. I am not sure but what there was much truth in their statements under the circumstances.

At that time school health education was extremely young. The pioneers in the field were active teachers. The words integration and correlation, and their subsequent influence on health education were still in swaddling clothes. School physical education which was born about 1919 was entirely set apart from the academic program. In the minds of the average layman as well as the average educator, the chief purpose of the physical education program was to produce perspiration and fatigue, and this concept still prevails. Little or no collective effort has been made towards tying in these subjects with the traditional academic program. I believe it is time for pruning. Health and physical education should be cut from the appendage stage and, if necessary, lose some of their identity by being incorporated into the academic program. I realize that after gaining so much and building up a powerful personnel that a statement such as this has the earmarks of heresy. I do not wish to lose anything we have gained. I only wish to see us expand and give our children the advantages of an integrated program in health and physical education.

In the title of my address I use the word teamwork. That is what I am now trying to say. Let there be teamwork between health, physical education and the traditional academic subjects. There should be a tightly woven interrelationship of aims and objectives. This, in my judgment, would strengthen the entire curriculum. It would be like a strong offensive in a game of football; and a strong offensive needs little defense.

By way of illustration may we look at the four traditional areas of the school health and physical education program. First, let us consider the program of healthful school living on the elementary level. We are aware that the basic principle is to provide pupils as well as the faculty with a school environment which is conducive to maximum qualities of mental, physical and social well-being. This means team-play on the part of every member of the school faculty—team-play which insures that grounds, buildings, discipline, subject matter will lend aid in contributing to the all-around advancement of the school population. No one individual or group shall have the responsibility for the health of the pupil. It must belong to all of them. Therein lies offensive strength. If the program in this area is conducted in such a manner it will be impossible or extremely costly to say that it is a frill,

to say that it is a nonessential and must be eliminated from the curricula.

The second area in the health and physical education program is that of health service. Here the basic concept is to appraise the health of the child, to help him correct remediable defects, and to prevent their reoccurrence. This type of program calls for teamwork without a flaw. The member of the team carrying the ball in this area is the classroom teacher. It is her ability, interest, stamina, and insight that will bring success to the program. Her daily health observations of pupils is the spark plug. Any pupil with symptoms or conditions which are different from that which the teacher considers normal or average may serve as a stimulus for bringing into play the attention of the nurse and the administrator. Failures in this phase of the work in the past have been essentially due to carelessness or inability of the teacher to recognize these deviations. In some instances deviations are recognized but a disinterested administrator passed them by, or to be charitable, failed in his attempt to meet the problem. If the condition is remediable, it is the responsibility of the school to encourage parents to seek a remedy. I have felt that schools collectively have been, and are still passive in this responsibility.

The public schools are charged with the total education of our youth. When an individual presents himself as a candidate, the school should insist upon his bringing reasonably good somatic materials with which to work. In other words, the pupil is expected to come to school with tools which will serve him effectively in the learning process. These tools are the eyes and ears. Supposing a class in shop work wishes to produce a precision job. The instructor explains all the details then informs the pupils that it will be satisfactory to bring their own tools from home. Little does it matter about the condition of these tools, just so long as they bring them regularly to school. Youngsters attempting to turn out a finished product without flaws under these circumstances waste their time. This is a stupid assignment and will result in failure.

The same principle holds true in the academic field. The administrator and the teacher want the child in school. As to effectiveness of his eyes and ears, they take for granted he has them and they are normal. On this premise, they insist upon high grade work in subjects such as reading and writing. Without an intimate knowledge of the condition of their tools, the classroom teacher becomes as inconsistent as was the shop instructor. Youngsters attempting to do good work with defective ears and eyes are under a terrific handicap. If every teacher and every administrator will insist on an eye and ear examination, and make this a prerequisite before academic work is attempted, and insist on supporting each other in this policy, the learning process will flow smoothly, and become a source of pleasure and happiness to all rather than a select few.

With such teamwork apparent, professional meddlers will have great difficulty in singling out any phase of the educational procedure to eliminate and cast into the refuse pile.

A third phase of the health and physical education program is that of instruction. Dr. Hussey of New York University says, "Since health is a condition of the organism and, therefore, not teachable in itself, it is evident that teaching health is a misnomer. It is better to say teaching to improve health, in other words, teaching for health." I agree with Dr. Hussey. Accepting "teaching for health" literally, implies the need for correlation. When the classroom teacher correlates health information and practices with the subject matter under consideration, she enriches the content and goes far in motivating her program. Integration and correlation combined with the traditional approach in the program of instruction for health place the full weight of the faculty on the side of the pupil.

The fourth area is that of physical education. On the elementary level this program has interesting possibilities of becoming a major phase in the academic curriculum. There are excellent opportunities for correlating this subject with the unit of study under consideration. For example, if the unit of work is on Mexico, as part of the classroom procedure, let the pupils from time to time, play the games and sports and enjoyable rhythms common to the children of that country. At no time should this be considered a substitute for the physical education period. According to the California Education Code there shall be a period of instruction covering games and sports which will aid in developing organic vigor, neuro-muscular training, bodily and mental poise, normal posture, coordinated strength and endurance, desirable moral and social qualities and a wholesome interest in recreational activities. It is understood that this is to be conducted independently of recess and lunch periods and under the leadership of trained individuals.

A third opportunity for the physical education program on this level, that of the intramural program, should not be overlooked. It is to be conducted after school hours and under supervision of paid personnel.

May we look for a time at the high school level. In the secondary schools the healthful living school program is essentially the same as that in the elementary grades. However, more individual responsibility can now be given for keeping the grounds and buildings clean and orderly. It is on this level that pupils may actively participate on the so-called academic team.

The only difference in the health service program on this level is that of expanding the service in the area of equipment and personnel.

As to the instruction for health, the correlation method of teaching should replace in a large measure the traditional course in hygiene. To make sure that all high school pupils receive basic health information, I suggest that a six weeks health unit, meeting five times a week, be incorporated into the freshman course in orientation. If this is not acceptable, then the unit may be placed some time during the senior year. Correlations coupled with the six weeks unit on health will give great strength and coherence to the secondary program.

Finally, may we consider physical education on the secondary level. I am in favor of giving this field a broad recreational approach. After suitable demonstration that he can walk, run and stand correctly, and that he is proficient in the skills of two or three recreational activities, the pupil should be allowed the freedom of a wide range of recreational games and sports. These two areas—that of instruction for the non-proficient and instruction-recreation for the proficient pupil—require trained leadership.

The recreational program should be closely correlated with actual opportunities that the pupil will be provided with both in and out of school. Then, too, the possible vocation of the pupil should be taken into consideration in establishing a curriculum of recreational activities.

By way of summary, may we look back upon these recommendations. Briefly I have stated that a program in health and physical education may be incorporated on all levels into the academic subjects frequently taught by the teacher of these subjects under proper supervision. This will give great strength to the curriculum. Further, it emphasizes the fact that the health and physical education programs are not necessarily the specific right of any one person or group of persons but an opportunity as well as a responsibility for service on the part of every member of the school staff.

Every team game has its members and each member has certain legal and moral responsibilities to himself, to his team, his backers, and to the game itself. The great American academic team works on the same plan. It is composed in most districts of the board of trustees, the district superintendent, the principal, teacher, health coordinator, physician, dentist, nurse, dental hygienist, cafeteria manager and school custodian, who have both legal and moral responsibilities to themselves, to their colleagues, to the community, to the children, and to education at large. In order to bring out harmonies and effectiveness of team power of this group in the field of school health may I list the following responsibilities, or perhaps better, opportunities for advancing the betterment of our youth.

OFFICIAL ACADEMIC TEAM ROSTER

I. DISTRICT BOARD OF EDUCATION OR TRUSTEES
The Education Code of the State of California states that the board of school trustees and city boards of education shall have power and it shall be their duty to give diligent care to the health and physical development of pupils. It, therefore, becomes mandatory that the board provide the school district with trained school personnel, a wholesome school plant, appropriate equipment, safe transportation to and from school, an opportunity to be served food in the school, and opportunities for a broad training in matters of personal and public health.

II. DISTRICT SCHOOL SUPERINTENDENT
A school officer representing the school board or trustees, usually the superintendent, shall assume the responsibility for a healthful school environment. He will make sure that:

1. School buildings are properly constructed and equipped.
2. Playgrounds are properly planned and equipped.
3. Rest rooms for pupils and faculty are provided.
4. Proper sanitary toilets and urinals are provided.
5. Sanitary drinking water certified by the county health department is available.
6. Adequate hand washing facilities are furnished (hot water, liquid soap and paper towels).
7. Adequate fire protection is maintained.
8. A janitor-engineer, who is trained to operate hygienically the grounds, buildings, supplies, heating, ventilation, cleaning and lighting, is employed.
9. There are properly adjusted seats and desks.
10. Classroom supplies are clean.
11. The length and arrangement of the school day benefit the health of the pupil.
12. The length of class periods meets the pupil's attention span.
13. The number, length and type of recess periods benefit the pupil.
14. Examinations, discipline and home study take into consideration individual differences.
15. A warm, nutritious breakfast and noon lunch are provided when there is a need.
16. Reasonable time and a warm, comfortable room are provided for eating.
17. Adequate space is provided for sanitary methods of handling and storing food.
18. Adequate provisions are made for the

physically handicapped or exceptional child.

19. A curriculum is provided for the staff which will bring out the most accepted methods for imparting information on health as well as opportunities for developing health practices.
20. Regular instruction is given on public safety, morals and manners, fire prevention, alcohol and narcotics.
21. Adequate transportation to and from the school is provided.
22. A faculty which meets approved standards of health and is capable of developing wholesome pupil teacher relationships is provided.
23. There is a plan of health guidance, which includes daily observation for health condition, health examination, medical examination and aid in securing needed treatment.
24. School personnel is adequately protected by retirement, insurance, salary, tenure and sabbatical leave policies.
25. There is supervisory aid to teachers so that there may be a well integrated coordinated program in the field of health.
26. There is an interscholastic athletic program consistent with the educational policies of the division of education for the state of California.
27. That trained leadership is provided as well as physical activities which are "physically wholesome, mentally stimulating and satisfying, and socially sound."

III. Principal

If there is no district superintendent, then the principal shall assume the responsibilities for both. Specific responsibilities for the principal in the health program are as follows—to conduct a health survey of the total school program:

1. A survey of the physical equipment which includes the following: site of school building and its surroundings; ventilation, heating and lighting; school cleaning; drinking water and facilities for washing hands; school furniture; toilet rooms; out-of-door playgrounds; indoor physical education areas; locker rooms and shower areas; swimming pool; supplies and equipment for health and physical education.
2. A survey of the health service program which includes: school physician, nurse, dentist, dental hygienist; health examination and follow-up program; daily observation by teachers; forms and records used; health service to teachers; cooperation between school and local health authorities, equipment for doctor and dentist; exclusion and readmission policy.
3. A survey of the emergency health program which includes policies on: acute illness; major injuries; minor injuries; fatalities; fire; flood; earthquake; bomb and gas attack; animals on school grounds; reporting emergencies, and emergency rooms and equipment.
4. A health information survey which includes all the courses offered so as to determine what health subject matter is considered either by plan or incidental teaching (secondary level). On the elementary level, a check should be made to determine if the program is being correlated.
5. The care of the exceptional child survey should include: hearing, vision, postillness and operation, hernia, asthmatics, epileptics, cripples, neurasthenics, malnourished, speech; spastics and home or bed confined.
6. The health of the teacher survey shall include policies on: periodical health examination, health service, physical surroundings, opportunities for in-service training, teacher load and recreation.
7. The cafeteria survey shall include the following: managerial control, food supply, health safeguards, service to pupils and faculty, methods of handling the money, educational values, maximum utilization of the room and equipment.

At the conclusion of the survey, the data are to be compiled and a report of recommendations presented to the district superintendent.

IV. Classroom Teacher

The teacher is responsible for encouraging wholesome health practices, for giving health information, and for setting wholesome standards in her classroom. According to the Education Code of the State of California she is required to give instruction on the following subjects: alcohol, narcotics, manners and morals, fire prevention, public safety and accident prevention. Further, she is charged with giving attention to such physical exercise for the pupils as may be conducive to the health and vigor of body as well as mind. In addition to this the teacher should provide the following for her pupils.

1. A clean, orderly and artistic classroom.
2. Ventilation of the room in such a way

that there is a constant supply of fresh air without draft.
3. Temperature of the room to be maintained between 68 and 70°.
4. 25 to 35 foot candles of daylight or artificial light on the work tables.
5. Reverberation and noise are held to a minimum.
6. Pupils with visual or auditory defects are seated so as to minimize their difficulty.
7. Classroom furniture adjusted to minimize muscular fatigue.
8. An emotional climate which is conducive to cooperative efforts on the part of pupil and teacher.
9. A program which centers around the growth and personality of individual pupils.
10. Encouragement in correct standing, sitting and running postures.
11. A cooperative attitude in the control and prevention of communicable disease.
12. Cooperation in policies established for physiological emergencies which may occur to pupils under her control.
13. A daily health observation of her pupils.
14. An opportunity to see the nurse or principal when symptoms warrant it.
15. Motivation for establishing wholesome health habits.
16. Health correlation with school subjects.
17. A cooperative interest in their home life.
18. Cooperation with the school nurse in all of her activities to promote a health program.
19. Cooperation with the physical education instructor in the game and sports program.
20. An opportunity to enjoy midmorning lunch.

V. School Physician

The school physician must hold an unrevoked certificate issued by the California State Board of Medical Examiners and a health and development certificate. His major responsibilities embrace the following:
1. To work in close harmony with the local board of health in matters of school health education.
2. To appraise periodically the health of the total student and teaching population.
3. To suggest and lead in procuring correction for remediable defects.
4. To be available for health counsel to pupils, parents and teaching personnel.
5. To work in harmony with the private physician, clinics and other health agencies for the betterment of the pupil.
6. To give medical care to those in need of first aid treatment.
7. To inspect and recommend procedures regarding sanitary conditions of the school plant.
8. To work in harmony with all other members of the school personnel.
9. To give aid in matters of school health publicity.

VI. School Dentist

The school dentist must have a certificate issued by the California State Board of Dental Examiners and a health and development certificate. His major responsibilities embrace the following:
1. To serve the school community by advising expectant mothers on how best to protect their own teeth and how to bring about strong teeth for the child.
2. To give that type of dental service which is recognized by authoritative dental bodies as acceptable and satisfying to the health and comfort of the pupil.
3. To give guidance and counsel to teachers, nurses and P.T.A. organizations on dental hygiene.
4. To encourage an educational approach on the part of the school towards the solution of dental defects.
5. To work in harmony with other members of the school personnel.

VII. School Nurse

The district school nurse must have a certificate of registration issued by the California State Board of Health and a health and development certificate.[1] "Her emphasis is upon health in the school program rather than upon the school nursing approach. . . . Responsibilities are frequently placed upon the nurse which she is not prepared to perform or which interfere with her real purpose. The nurse should not take the place of the classroom teacher in instruction for health. She should be called upon to interpret instruction on first aid, infant hygiene, home nursing, care of the sick, foods, and general problems of personal hygiene. There are so many worthy activities for the nurse to be engaged in that using her essentially as an attendance officer would appear to be a misuse of her time." If, however, the home calls are contacts for health education, the procedure is defensible. Regardless of the nurse's affiliation outside of the school, her major responsibility is to the school officials.

[1] *The Administration of Health and Physical Education*, by Williams and Brownell, p. 196.

In order to fully discharge the duties of a school nurse she should include the following in her scope of responsibilities:

1. Assume charge of the dispensary.
2. Aid the school physician and dentist in the conducting of examinations.
3. When necessary, conduct health appraisals of pupils.
4. Work in collaboration with the principal and the custodian in a monthly inspection of the school plant.
5. Give information and health education materials to teachers and administrative officers.
6. Encourage a school health committee and school health clubs.
7. Enlist the interest of parents in a school health program through home visits, participation in the work of the P.T.A. and such organizations, and by inviting parents to school for health conferences.
8. Aid the teacher in coordinating health units with the general curriculum.
9. Keep in close contact with official and nonofficial health agencies outside of the school.
10. Give first aid and follow-through service to faculty and student population when the occasion arises.
11. Maintain an up-to-date, well-stocked first-aid kit for the school.
12. Establish effective measures for the control of communicable diseases.
13. Readmit students who are returning to school from absence due to physical disability.
14. Keep up-to-date on health education procedures and literature.
15. Work in collaboration with school personnel responsible for the lunch program.
16. Encourage parents to bring about correction of remediable defects discovered in their children.
17. On the high school level, advise the principal when the facts warrant comment regarding the effect upon pupil health of: social functions, examinations, pupil load, work after school, etc.

VIII. Dental Hygienist

The dental hygienist must have a certificate issued by the State Board of Dental Examiners of the State of California and a health and development certificate. Her functions embrace the following:

1. To assist the school dentist in his work.
2. To encourage a year-around education program in dental hygiene.
3. To aid parents in obtaining dental service for their children.
4. To serve as a coordinator between the school and recognized dental societies.
5. To assist teachers in matters pertaining to the dental health of children.
6. To counsel and guide parents and P.T.A. groups on integrating the program of mouth health with the general school curriculum, and
7. She may inspect mouths and give prophylactic cleaning.

IX. Health Coordinator

The health coordinator should be appointed by the school principal and serve as chairman of the school health committee. The specific responsibilities of this individual are as follows:* *

1. To serve as chairman of the school health committee.
2. To direct all surveys involving the school health program.
3. To formulate recommendations resulting from surveys of the health program.
4. Upon request to interpret to teachers and administrators findings of health, dental, and psychological examinations.
5. To aid the teacher in correlating the health program with the general curriculum.
6. To aid the nurse in controlling the sanitation of the school.
7. To teach the health unit in the orientation courses.
8. To assist in counseling students on health problems.
9. To assist attendance officers in compiling data on monthly absences due to illness.
10. To study causes of absences due to illness and make appropriate recommendations.
11. To advise on school health publicity.
12. Upon request to give talks to P.T.A. and other service groups.
13. To encourage a wide use by the faculty of a master chart on each pupil.

X. Cafeteria Manager

The cafeteria manager is trained in matters of nutrition, sanitation and business. She is directly responsible to the school officials. The following may be considered as minimum essentials towards which the cafeteria manager should strive.

1. The cafeteria program is an educational experience in good nutrition.
2. All persons engaged in the preparation

* If there is a school nurse on the faculty, the health coordinator and the nurse may collaborate on these responsibilities.

or serving of food receive a periodical examination from the school physician.
3. All persons engaged in the preparation and serving of food and who are absent from duty due to illness present a statement to the school officials signed by the school physician that he is well enough to resume his work.
4. Food cooked or prepared at home may not be served to the school population on the school grounds.
5. State laws governing the sanitation of cafeterias are observed at all times.
6. All windows and doors of the cafeteria are screened.
7. The cafeteria room is attractive and cheerful.
8. All profits are turned back into a program for advancing the nutrition status of the student population.
9. The finances are conducted under an adequate accounting system.

XI. School Custodian

The janitor-engineer in the modern scheme of education has a position of great importance in the school health program. Following are his major health responsibilities:

1. He practices up-to-date modern sanitary procedures relative to the care of the school plant.
2. He abides by the sanitary code of the state of California.
3. He has the health and safety interests of the school population.
4. He understands the importance of light, heat and ventilation on the health of the students and faculty.
5. He knows the fire prevention code applicable to schools.
6. He is trained in modern first aid techniques.
7. He has organizing ability and keeps an up-to-date filling system.

PRE-INDUCTION HEALTH

Cincinnati High School Seniors Study Efficient Management of Personal Living in Wartime

W. K. STREIT
Director of Physical Education
Cincinnati Public Schools

Health, always important, takes on new meaning with the nation at war. While physical health and physical fitness are fundamental, mental and social aspects of health need careful consideration if youth is to make the proper adjustment in this abnormal period. In an effort to pull together these three phases of health and give them classroom consideration before school days are over, the Cincinnati public schools are presenting a Pre-Induction Health Course to all twelfth grade boys and girls during the second semester of the current school year.

The Efficient Management of Personal Living in Wartime course will give consideration to such questions as these: What shall I do between now and the time I am called for military service? What effect will military life have on me? As a girl free to choose, should I enter military service or remain in civilian life? Because father and mother are both overworked, they are nervous and touchy and we get into arguments over nothing. What can I do? What will I do if I am rejected for physical unfitness? When am I going to get time for recreation? What is there for girls to do now that all the boys our ages are going away? Should I have a last fling before I go into service? Where am I going to learn what I should do about sex relations? Should a girl be married before her boy friend goes to war?

The course is designed to discuss some of the many problems being presented in these critical times. Most of the young men will go into the military services. Most of the young women will be less protected by their homes and more responsible for their own welfare than heretofore. Many will go into industry, replacing men. Most will work hard, play hard, and live under greater strain. Many acquaintances will be temporary; many old friendships will seem uncertain and insecure. *Pre-Induction Health* was planned to give older pupils who will soon leave high school some special preparation to meet more fully and with confidence and success the hazardous wartime conditions which they are now facing or must face in the immediate future and which are otherwise adequately met by the established high school program. War brings increased need to care for physical health, brings into focus the problems of mastering emotions, intensifies the problems of relations between men and women, emphasizes the importance of turning fear into courage and of dealing with disease, homesickness, discouragement and disappointment.

The table of contents of this 82-page course of study shows an introduction, chapters on mental hygiene, health and physical fitness, and social hygiene, conclusion and review, and an appendix consisting of "Psychology for the fighting man", and "To a citizen of tomorrow." References and per-

sonal problems are listed in each chapter. The manuscript was prepared by a committee of teachers headed by Dr. Jack Hertzman, Acting Director of School Hygiene and Health; W. K. Streit, Director of Physical Education; and Roy E. Dickerson, of the Cincinnati Social Hygiene Society.

The armed forces are just as conscious of mental health problems as they are of physical defects. Personality deficiencies may be more crippling to an individual than loss of limb. Approximately 6 out of every 100 men examined at induction centers have been rejected for mental reasons. More important than this figure is the fact that much of the difficulty that men and women have in adjusting to military life and training may be traced to deep-rooted mental habits and attitudes. The individual should learn to understand himself and his emotions. He should understand that there is a place for grief, fear, and anger. He should be familiar with the drives and motives that determine people's actions. The well-adjusted young man and woman may find military life hard, but will adjust to it and find certain positive values in the experience. Hence, emotional problems, self-discipline, confusion, insecurity, dependency, conflicts, and the main areas of personality development are given careful treatment in the mental hygiene section of the course.

Since all eleventh and twelfth graders received a thorough physical examination including an x-ray examination of the chest and serological test, all terms on the school health record are explained and the importance of the correction of impairments is stressed. This is followed by a discussion of the physical standards for the various branches of the armed forces and the causes for rejection. Military and industrial hygiene deals with signs and symptoms of disease, health practices that aid control, and a discussion of ten infectious diseases. There is also a consideration of health protection of workers in industry, how workers may protect themselves and health standards emphasized by industry. Brief treatment is given to such items as exercise, cleanliness, immunity, fatigue, and first aid.

Youth's obligation to keep fit is treated from the social hygiene approach along with the main factors in masculine and feminine fitness, wartime situations, medical aspects of venereal infections and certain distinctive aspects of sex in humankind.

A try-out course was given for ten weeks last spring along these same lines. It proved so popular with the students that school authorities decided to double the amount of time allotted to it this year and to revise the outline of the course which had found its way into schools in all parts of the country. Teaching responsibilities fall upon nineteen teachers of physical education and five teachers of science in the nine academic and vocational high schools of the city. Military and industrial leaders, medical personnel, parents and pupils are enthusiastic about the course which is different from any previous offering of the Cincinnati Schools.

HOW I AM KEEPING PHYSICALLY FIT AT THE AGE OF 78

DR. ROBERT NOHR, SR.
Cheviot 11, Ohio

The Grand Secretary-Treasurer of Phi Epsilon Kappa Fraternity, Brother Romeiser, requested me to tell the readers of *The Physical Educator* how I keep physically fit at the age of 78. Almost anyone can do the same for himself or herself if the same or a similar routine is kept up through the years.

Upon rising every morning I start the day by drinking a glass of water to sort of refresh and flush my stomach. Then I wash and shave and by this time I am wide awake. The set of exercises described herewith are then executed with a few brief rests between some of them before breakfast. I prefer doing them at this time. They help me to start the day full of vim and maintain the endurance which keeps me going to the end of the day without being fatigued. I have practiced this set daily during the past 10 years and found them to be very beneficial to me. There are many other exercises equally as good, but those described suit

me best. I recommend that pupils start this type of activity during the school age and keep it up to the end if possible.

Believing that proper conditioning exercises do more good than any other type of activity to put one in a physically fit condition, I began practicing an extra lesson of 20 exercises daily 30 years ago. This was done as an interesting experiment for my own benefit in order to determine whether or not the results would be beneficial and would pave the way for an active, healthy and happy life at my present age. I know now that I had the right idea. The original set of exercises was not the same as I am using now, but it was effective. The present set it more advanced. It always preceded my daily teaching in the public schools of Cincinnati and I have kept up this daily routine since my retirement from regular teaching in 1935, at the age of 70 years. After that date I was asked to substitute very often until January, 1944, when I decided to retire altogether from public school teaching. I am still teaching a ladies' class on Monday evening, a men's class on Wednesday evening, attend social dancing lessons on Thursday evening, bowl with the schoolmasters' league Friday after school and during the summer vacation supervise a playground in Cheviot, Ohio, for 10 weeks. This is enough teaching for me at my age and I enjoy it.

Health Habits

I follow the usual health habits, familiar to everyone, that are essential to complete a real program.

For breakfast I like to start with grapefruit without sugar followed by one of the various breakfast foods, coffee cake and one cup of coffee. At noon and for supper a balanced diet of wholesome foods is eaten slowly and masticated thoroughly. I never eat as much as I can, but just enough and never eat between meals. My appetite is always good.

I retire at a reasonable hour to put in 7 hours and as often as possible 8 hours. I also take a short nap late in the afternoon to be refreshed for the evening activities. No trouble going to sleep soon after retiring for the night.

I used to enjoy smoking, but had to quit it 30 years ago on account of a throat irritation and never cared to try again. I felt better thereafter and gained some weight, but not too much.

Due to the exercises, I am never constipated as many men are at my age. Very seldom troubled with headaches. Many of my friends remark that I look, and act much younger than my age calls for, and believe me I feel much younger.

The limited space prevents me describing how the body parts are affected by the various exercises. Physical educators will very likely know this anyway. In conclusion, I wish to emphasize that the trunk movements are very essential and should be executed every day in order to give the various internal organs proper stimulation. Furthermore, so long as anyone keeps his (or her) spinal column limbered up better health and a longer life will be enjoyed. I believe that the above statements are proof enough that I am able to keep going for some time to come.

Conditioning Exercises

FOR THE PURPOSE OF KEEPING PHYSICALLY FIT ALWAYS. ARRANGED BY DR. ROBERT NOHR, SR.

Suitable for both sexes 16 years and upwards.

When used for both sexes under 16 years, change the exercises to suit the different ages. At home place a blanket on the floor, folded ½ or ¼ and lie on it, rather than using the mattress on the bed. This will also prevent chilling the body and better results will be attained from the exercises. This routine is arranged for those who will practice daily at home, preferably before breakfast, to be able to start the day right.

If used in the gymnasium for class lessons, select certain of the exercises for one or more weeks in a progressive manner. Also switch other movements in between to keep up the interest. Lie on back for exercises 1 to 12 inclusive. However, most of these exercises may be practiced in the sitting position with hands placed in rear of hips on the floor for support. See separate copy of illustrations.

Exercises

1. Lie on back, arms at sides.
   Bend arms upw. and immediately extend upw. in line with trunk, press the lumbar region down, the legs and feet fully extended—1! Hold on counts—2, 3! Relax and resume starting pos.—4! Repeat 3 times. Fig. 1.
2. Raise knees to chest—1! Extend legs overhead—2! Return in reverse order—3, 4! Repeat 3 or 4 times. Fig. 2.
3. Similar to Ex. 2, but raise extended legs—1! Lower—2! Repeat 4 or more times. Fig. 2.
4. Starting pos., knees raised upw. arms sw. shoulder level on the floor for support, palms downw.
   Extend both legs obl. sw. upw. L.—1! Return—2! Fig. 3. Repeat R.—3, 4! Alternate 6 to 8 times. On the last count extend legs upw. in preparation for Ex. 5. Fig. 4.
5. Starting pos. See Fig. 4.
   Spread legs wide sw. Fig. 5a—1! Cross legs, L. over R. Fig. 5b—2! Same as count 1—3! Same as count 2, but R. over L.—4! Repeat 8 times—5, 32!
6. Starting pos. same as Ex. 5.
   Lower both legs sw. L. to nearly touching L. hand Fig. 6—1! From L. change to R.

sonal problems are listed in each chapter. The manuscript was prepared by a committee of teachers headed by Dr. Jack Hertzman, Acting Director of School Hygiene and Health; W. K. Streit, Director of Physical Education; and Roy E. Dickerson, of the Cincinnati Social Hygiene Society.

The armed forces are just as conscious of mental health problems as they are of physical defects. Personality deficiencies may be more crippling to an individual than loss of limb. Approximately 6 out of every 100 men examined at induction centers have been rejected for mental reasons. More important than this figure is the fact that much of the difficulty that men and women have in adjusting to military life and training may be traced to deep-rooted mental habits and attitudes. The individual should learn to understand himself and his emotions. He should understand that there is a place for grief, fear, and anger. He should be familiar with the drives and motives that determine people's actions. The well-adjusted young man and woman may find military life hard, but will adjust to it and find certain positive values in the experience. Hence, emotional problems, self-discipline, confusion, insecurity, dependency, conflicts, and the main areas of personality development are given careful treatment in the mental hygiene section of the course.

Since all eleventh and twelfth graders received a thorough physical examination including an x-ray examination of the chest and serological test, all terms on the school health record are explained and the importance of the correction of impairments is stressed. This is followed by a discussion of the physical standards for the various branches of the armed forces and the causes for rejection. Military and industrial hygiene deals with signs and symptoms of disease, health practices that aid control, and a discussion of ten infectious diseases. There is also a consideration of health protection of workers in industry, how workers may protect themselves and health standards emphasized by industry. Brief treatment is given to such items as exercise, cleanliness, immunity, fatigue, and first aid.

Youth's obligation to keep fit is treated from the social hygiene approach along with the main factors in masculine and feminine fitness, wartime situations, medical aspects of venereal infections and certain distinctive aspects of sex in humankind.

A try-out course was given for ten weeks last spring along these same lines. It proved so popular with the students that school authorities decided to double the amount of time allotted to it this year and to revise the outline of the course which had found its way into schools in all parts of the country. Teaching responsibilities fall upon nineteen teachers of physical education and five teachers of science in the nine academic and vocational high schools of the city. Military and industrial leaders, medical personnel, parents and pupils are enthusiastic about the course which is different from any previous offering of the Cincinnati Schools.

HOW I AM KEEPING PHYSICALLY FIT AT THE AGE OF 78

DR. ROBERT NOHR, SR.
Cheviot 11, Ohio

The Grand Secretary-Treasurer of Phi Epsilon Kappa Fraternity, Brother Romeiser, requested me to tell the readers of *The Physical Educator* how I keep physically fit at the age of 78. Almost anyone can do the same for himself or herself if the same or a similar routine is kept up through the years.

Upon rising every morning I start the day by drinking a glass of water to sort of refresh and flush my stomach. Then I wash and shave and by this time I am wide awake. The set of exercises described herewith are then executed with a few brief rests between some of them before breakfast. I prefer doing them at this time. They help me to start the day full of vim and maintain the endurance which keeps me going to the end of the day without being fatigued. I have practiced this set daily during the past 10 years and found them to be very beneficial to me. There are many other exercises equally as good, but those described suit

me best. I recommend that pupils start this type of activity during the school age and keep it up to the end if possible.

Believing that proper conditioning exercises do more good than any other type of activity to put one in a physically fit condition, I began practicing an extra lesson of 20 exercises daily 30 years ago. This was done as an interesting experiment for my own benefit in order to determine whether or not the results would be beneficial and would pave the way for an active, healthy and happy life at my present age. I know now that I had the right idea. The original set of exercises was not the same as I am using now, but it was effective. The present set it more advanced. It always preceded my daily teaching in the public schools of Cincinnati and I have kept up this daily routine since my retirement from regular teaching in 1935, at the age of 70 years. After that date I was asked to substitute very often until January, 1944, when I decided to retire altogether from public school teaching. I am still teaching a ladies' class on Monday evening, a men's class on Wednesday evening, attend social dancing lessons on Thursday evening, bowl with the schoolmasters' league Friday after school and during the summer vacation supervise a playground in Cheviot, Ohio, for 10 weeks. This is enough teaching for me at my age and I enjoy it.

Health Habits

I follow the usual health habits, familiar to everyone, that are essential to complete a real program.

For breakfast I like to start with grapefruit without sugar followed by one of the various breakfast foods, coffee cake and one cup of coffee. At noon and for supper a balanced diet of wholesome foods is eaten slowly and masticated thoroughly. I never eat as much as I can, but just enough and never eat between meals. My appetite is always good.

I retire at a reasonable hour to put in 7 hours and as often as possible 8 hours. I also take a short nap late in the afternoon to be refreshed for the evening activities. No trouble going to sleep soon after retiring for the night.

I used to enjoy smoking, but had to quit it 30 years ago on account of a throat irritation and never cared to try again. I felt better thereafter and gained some weight, but not too much.

Due to the exercises, I am never constipated as many men are at my age. Very seldom troubled with headaches. Many of my friends remark that I look, and act much younger than my age calls for, and believe me I feel much younger.

The limited space prevents me describing how the body parts are affected by the various exercises. Physical educators will very likely know this anyway. In conclusion, I wish to emphasize that the trunk movements are very essential and should be executed every day in order to give the various internal organs proper stimulation. Furthermore, so long as anyone keeps his (or her) spinal column limbered up better health and a longer life will be enjoyed. I believe that the above statements are proof enough that I am able to keep going for some time to come.

Conditioning Exercises

FOR THE PURPOSE OF KEEPING PHYSICALLY FIT ALWAYS. ARRANGED BY DR. ROBERT NOHR, SR.

Suitable for both sexes 16 years and upwards.

When used for both sexes under 16 years, change the exercises to suit the different ages. At home place a blanket on the floor, folded ½ or ¼ and lie on it, rather than using the mattress on the bed. This will also prevent chilling the body and better results will be attained from the exercises. This routine is arranged for those who will practice daily at home, preferably before breakfast, to be able to start the day right.

If used in the gymnasium for class lessons, select certain of the exercises for one or more weeks in a progressive manner. Also switch other movements in between to keep up the interest. Lie on back for exercises 1 to 12 inclusive. However, most of these exercises may be practiced in the sitting position with hands placed in rear of hips on the floor for support. See separate copy of illustrations.

Exercises

1. Lie on back, arms at sides.
   Bend arms upw. and immediately extend upw. in line with trunk, press the lumbar region down, the legs and feet fully extended—1! Hold on counts—2, 3! Relax and resume starting pos.—4! Repeat 3 times. Fig. 1.
2. Raise knees to chest—1! Extend legs overhead—2! Return in reverse order—3, 4! Repeat 3 or 4 times. Fig. 2.
3. Similar to Ex. 2, but raise extended legs—1! Lower—2! Repeat 4 or more times. Fig. 2.
4. Starting pos., knees raised upw. arms sw. shoulder level on the floor for support, palms downw.
   Extend both legs obl. sw. upw. L.—1! Return—2! Fig. 3. Repeat R.—3, 4! Alternate 6 to 8 times. On the last count extend legs upw. in preparation for Ex. 5. Fig. 4.
5. Starting pos. See Fig. 4.
   Spread legs wide sw. Fig. 5a—1! Cross legs, L. over R. Fig. 5b—2! Same as count 1—3! Same as count 2, but R. over L.—4! Repeat 8 times—5, 32!
6. Starting pos. same as Ex. 5.
   Lower both legs sw. L. to nearly touching L. hand Fig. 6—1! From L. change to R.

side thru the upw. direction—2! Repeat 8 times each way.

7. Starting pos., same as shown under Fig. 2. Circle both legs horizontally (medium rhythm) R. around 8 times.
Change to L. around 8 times. Fig. 7 top view.

8. Starting pos.—Lie on back, draw R. foot under thigh, cross L. leg over R. knee, flex forearms upon the arms. Fig. 8.

a. Extend L. instep and close hands tightly—1! Bend L. foot upw. far as possible, extend and spread fingers—2! Repeat 8 times.

b. Move extended foot inw. and outw. 8 times, i.e., toward big toe, then little toe.

c. Circle foot inw. 8 times. Then outw. 8 times.

d. Change pos. of legs and repeat a, b, c with R. foot. Add hand exercise as under a, b c and d.

e. Raise both knees upw., now simultaneously extend L. instep and bend R. foot upw., and only clinch L. hand—1! Change to oppo. pos. clinching R. hand and extending and spreading fingers of L. hand—2! 8 times.

f. Extend both insteps and clinch hands tightly—1! Bend both feet upw. and extend fingers of both hands—2! 8 times. Add here 8b with both feet L. and R. alternately.

g. Circle both feet inw. 8 times, then outw. 8 times with hand movements to every count as before.

h. Circle both feet R. around 8 times. Then L. around 8 times.

Note—All movements under Ex. 8 may be executed with the feet only in the sitting pos. then hands to be placed in rear of hips on the floor for support of the body. However a brief rest after 8d will be necessary. Or take the exercise under 8 a, b, c, d one day and 8 c, f, g, h the next time.

i. Add frog kick as used in breast stroke swimming horizontal with floor. 8 times.

9. Starting pos.—Lie on back, arms sw. on a level with the shoulders, palms down.
Raise L. leg upw.—1! Lower L. leg and raise R. Repeat—2! Repeat alternating 8 times.
Starting pos.—Same as Ex. 9.

10. Move L. leg crosswise over R: and touch R. hand with L. foot Fig. 9 top view. (Keep the shoulders flat on floor)—1! Return—2! Same oppo.—3! Return—4! Repeat 8 times L. and 8 R.
Starting pos.—Lie on back, place toes under a piece of furniture for support and the arms at side.

11a. Lift trunk (chest raised), bend fw. as far as possible, the hands to slide along side of legs and feet Fig. 10—1! Return in reverse order—2! Repeat 4 to 6 times.

b. Same as 11 a, but with arms held overhead thruout. 4 or 6 times.
Starting pos.—Feet sw. far apart and supported as under Ex. 11a.

12. Rotate (circle) trunk L. around in nearly horizontal plane, Fig. 11, slowly in about 3 or 4 counts. Repeat 4 times. Same oppo. 4 times.

Note—In the gymnasium Ex. 11 and 12 add a partner for companion exercises. In Ex. 12 partners may join hands oppo. the soles of feet against partners feet very far apart, then as one is bending fw. the partner is in the oppo. position also all around. Or as Fig. 11.
Starting pos.—Sitting pos., hands in rear of hips on the floor for support, arms slightly bent, the legs raised obl., fw., upw. Fig. 12. Or rest on forearms.

13a. Bicycle fw. 8 times. Same bw. 8 times to regular rhythm. Repeat rapidly 8 times.

b. In slow rhythm, circle both legs forw. simultaneously 4 to 6 times, then bw. the same 8 times.
Starting pos.—Same as Ex. 13.

14. Sharply stretch both legs obl. fw. upw.—1! Drop lower legs relaxed and dangle on counts 2, 3, 4! Repeat 3 or 4 times.

Note—This starting pos. is by far more valuable for bicycling. the legs as compared with lying on the back. Try it to notice the difference.
Starting pos.—Stand with feet parallel about 2 or 3 inches apart, toes pointing fw., arms at sides.

15a. Roll L. foot up on its toes (that is—raise L. heel) Fig. 13!—1! Roll R. foot up on its toes, knees extended (that is—standing on tip toes momentarily) then lower L. heel—2! The weight of the body is lifted on one foot each time. The arms may swing fw. and bw. naturally pendulum like. Repeat 16 times.

b. Same as a, but take short walking steps fw. on balls of feet to tip toe and lower with each step. (called springy walking steps). Same bw. Repeat 8 fw. and 8 bw.

16. Run in place with high fw. knee raising and keep up the same ankle movement as under Ex. 15. The arms to be bent at right angle, palms turned downw., move forearms gently fw. and bw. naturally. Fig. 14. Repeat to 24 or 32 counts.

17. Starting pos. same as Ex. 15, but bend forearms upw., hands along side of shoulders, fingers pointing upw., palms toward shoulders. Bend knees half way without raising

heels, to stretch the lower leg muscles and stretch arms downw. Fig. 15—1! Return—2! Rise high on toes and stretch arms upw. —3! Return—4! Repeat 3 or 4 times.
Starting pos.—Squat rest, place hands on floor in front of feet, knees outside of arms.

18a. Remain on toes, extend knees and stretch arms upw. and immediately return to starting pos. on counts 1 And! Repeat 8 times in lively rhythm.

b. Same as a, but add jump upw. (the whole body must be stretched from toes to finger tips in the flight) immediately land in starting pos. on counts 1 And! Repeat 8 times. See Fig. 16 a and b.

Note—By this time considerable fatigue is felt in the lower legs so shake the legs in a relaxed manner several times to get rid of it.

19. Standing on R. leg raise L. knee fw. height of hip. R. arm. obl. fw. downw., the L. arm obl. bw. downw. (arms relaxed) Fig. 17 a then snap the L. leg downw. and finish with the lower leg raised bw. and relaxed, the arms swing downw. pendulum like and change to oppo. pos. Fig. 17 b on count 1! Resume pos. as under Fig. 17 a-2! Repeat 8 times. Same with R. leg 8 times.

Note—This exercise will relieve fatigue of the legs also when following Ex. 18 a and b.

20. Starting pos.—Feet parallel, about 4 inches apart, toes pointing fw., arms raised obl. fw. upw. slightly bent and relaxed, hands closed slightly.
Forward trunk dipping as follows: Relax the trunk and bend fw. downw., the arms lower fw. downw. to palms touching floor in front of feet (knees must not bend) then the trunk immediately rebounds to about right angle of the legs. Fig. 18 a and b—on counts 1 And!
Repeat 6 more times and with the 8th count return to starting pos. in a wave-like manner Fig. 19 a, b, c and d.
Note—Fig. 19 must finish in a snappy manner. Repeat 2 or 3 times.

21a. Starting pos. same as under Ex. 20.
Bend knees deeply, simultaneously bending trunk relaxed fw. downw., swing the relaxed arms fw. downw. sharply in a pendulum like manner, the hands nearly touch the floor in passing bw. Fig. 20 a, then extend the knees as the trunk is bent downw. as far as possible and the arms finish in the bw. upw. pos. Fig. 20 b on count—1! On the return movement the knees bend deeply and arms start swinging downw. and in one sharp movement resume the starting pos. Fig. 20 c on count—2! Repeat 8 times.

b. After (a) is mastered, then try (a) by adding a jump uw. at the finish, but be sure to land well on both feet to be able to repeat immediately. Try (a) 4 times then add (b) during the next 4.

22. Coming up for the last time under Ex. 21 a, lunge fw. L. with both knees bent for a dipping movement, simultaneously bend arms for striking from the shoulder level Fig. 21 a, then nearly extend both knees and lift forearms so hands are on a level with top of the head in a sort of rebound manner Fig. 21 b, all on count—1! Repeat the knee dipping and re-bounding arms for striking 2 more times on count 2, 3! Return to fundamental standing pos. on count—4! Change to fw. R.—5, 8! Repeat L. and R. 9, 16!

23. From the fundamental pos. stride fw. L., kneel on R. knee and raise arms sw. shoulder level Fig. 22—1! Hold pos.—2! Quickly rise to standing on R. leg, swing L. leg bw., bend R. knee and kneel on L. knee—3! Hold pos.—4! Repeat counts 1 to 4—5, 8! Quickly rise, close L. foot to R. and immediately stride fw. R. and repeat counts 1 to 8 with the R. foot moving fw. and bw.—9, 16! May repeat 17, 32!
Note—The foot that is moved bw, should rest on the instep instead of the heel raised. See illustrations.

24. Standing on R. leg raise L. knee sw. height of hips, the arms sw. shoulder level Fig. 23 a, immediately snap L. leg downw., and finish with the lower leg raised in front of R. lower leg relaxed, the arms swing downw. in a pendulum manner relaxed and crossed low in front Fig. 23 b on count—1! Resume pos. as under 23 a—2! Repeat count—1! but swing lower leg behind R. leg—3! Resume pos. as under Fig. 23 a—4! Repeat counts 1 to 4—5, 8! Change pos. to L. leg and repeat counts 1 to 8 with R. leg—9, 16! May repeat L. and R. again 17, 32!

25a. Stride fw. L., raise arms fw. upw., hands closed lightly and immediately whole arm circle fw. L., simultaneously dip knees, turn trunk L. as far as possible as the arm is bw.—1! Dip knees and turn trunk R. with R. arm circling fw.—2! Repeat counts 1, 2—8 times. Fig. 24 a.

b. Stride fw. R. and repeat a, but circle arms bw. 8 times.

c. Change to stride pos. sw., dip knees and turn trunk as under a above, but mill circle arms fw., the L. arm leading ½ circle ahead of R. arm in rapid rhythm 8 times. Change

arm circling to bw. 8 times in regular rhythm. Fig. 24 b.

d. Double arm circle forw. with a wave movement of body 4 times. Backw. 4 times. Repeat fw. and bw. again.

26. Golf movement. The Long Drive. Step sw. R., carry weight, simultaneously ¼ turn trunk R., turn L. knee inw., heel raised, swing arms sw. uw. R. hands clasped as if holding a golf club, the trunk slightly bends sw. in line over where ball is supposed to be and look down at same spot Fig. 25 a—1! Hold pos.—2! Lower L. heel. Shift weight to L. foot, turn trunk L., a fraction later swing arms down, then up on L. side, hands above L. shoulder about height of head, changing the rest of the pos. of the body oppo. to count—1! Fig. 25 b on count—3! Hold—4! Repeat 7 times.

27. Lunge sw. L., bend L. arm for striking, raise R. arm sw., hands closed tightly, knuckles turned bw.—Fig. 26—1! Change knee bending and arm pos. to oppo.—2! Repeat 1, 2! —3, 8! For the next 8 counts repeat, but with heels raised—9, 16!

28a. Hop on L. foot, raise R. leg high sw., bend L. arm for striking, raise R. arm sw., hands closed tightly Fig. 27—1! Hold pos. and hop again on L. foot—2! Cut step sw. with R. foot and change arm pos. to oppo.—3! Hop on R. foot—4! Cut step sw. with L. foot and repeat to and fro 7 times—5, 32! Or 4 times only in the beginning.

b. Repeat a but cut steps only (that is: omit the hop) arm pos. changing to and fro to each count for the next 16 counts.

29. Starting pos.—Side straddle pos. raise arms upw., clasp hands and turn palms upw. Fig. 28 a.

a. Dip knees and dip trunk sw. L. (that is: bend and rebound to starting pos. in one count) Fig. 28 b—1! Repeat 3 times—2, 3, 4! Repeat to R.—5, 8! Alternate L. and R. 4 times. On the last count lower arms to sw. shoulder level Fig. 29 a. May repeat a.

b. Dip knees and dip trunk sw. L. as under a, bend L. arm on back and R. arm overhead Fig. 29 b—1! Change pos. to oppo.—2! Repeat 3 times—3, 8!

c. Bend knees deeply, bend and turn trunk R., lower R. arm behind body and touch L. raised heel Fig. 29 c—1! Starting pos.—2! Same oppo.—3! Starting pos.—4! Repeat 3 times.

30. Fundamental pos.—Lower to squat rest, hands rest on floor in front of feet, knees between arms fig. 30—1! Extend legs bw. to a front leaning rest Fig. 30 b—2! Return in reverse order—3, 4! Repeat 3 times, or more.

31. Starting pos.—Front leaning rest, see Fig. 30 b. For older boys and men. Dip arms 10 10 to 12 times. As the arms bend, exhale. With arms stretching inhale. Fatigue does not set in so early if breathing is done this way. Use the regular rhythm.

32. To relieve fatigue in the arms add here raise shoulder—1! Lower—2! The arms to be relaxed (sort of dangle in lively rhythm). May add relaxing the whole body as much as possible while taking 8 hops on L. foot; change to 8 hops on R. foot; then short straddle jump sw.—1! Jump to crossed pos. of feet L. in front—2! Same as count—1, 3! Same as count 2, but R. foot in front—4! Repeat several times.

33a. Starting pos. same as Ex. 30, Fig. 30 on count 1. Stretch L. leg bw. Fig. 31—1! Return—2! Same R.—3! Return—4! 8 times.

b. Same as a—1! Change pos. of legs—2! Repeat alternating in 2 counts 4 or more times.

34. Starting pos.—Straddle pos. sw., arms raised upw., hook the thumbs to keep the arms in pos. Fig. 32.
Slowly lower trunk fw., then circle trunk R. around 4 times. Repeat L. around 4 times. Repeat 4 L. and 4 R. again.

35. Starting pos.—Straddle pos. sw., lower trunk fw. (about right angle), grasp the lower legs half way between ankles and knees, arms extended Fig. 33 dip trunk fw. as far as possible 7 times. Straighten up on the 8th count. Repeat again 9, 16! As the trunk dips fw., point elbows outw. Regular rhythm.

36. Fundamental pos.—

a. Hop twice on L. foot and sharply kick obl. fw. downw. with R. leg and natural relaxed fw. arm swinging alternately L. and R. parallel with the legs Fig. 34—1, 2! Same oppo. —3, 4! Repeat 5, 16!

b. Same as 36 a, sw. with both arms swinging to low R. and L. lateral pos. Fig. 35—1, 16!

c. Same as 36a, bw. with relaxed L. arm swinging obl. bw. downw., the R. obl. fw. upw. Fig. 36—12! Same opposite—3, 4! Repeat 5, 16!

37. Face L., hop on L. foot, raise R. leg olb. bw. downw., knee slightly bent, raise arms obl. sw. downw. slightly bent Fig. 37 a—1! Hop on L. foot again, ½ turn R. and twist kick with R. leg Fig. 37 b—2! Same oppo.—3, 4! Repeat—5, 16!

38. Front crossstep L., raise arms obl. sw. downw. slightly bent—1! Sharply swing R. leg sw., quickly spring off of L. foot and while in the flight slap L. foot against the R. and assist

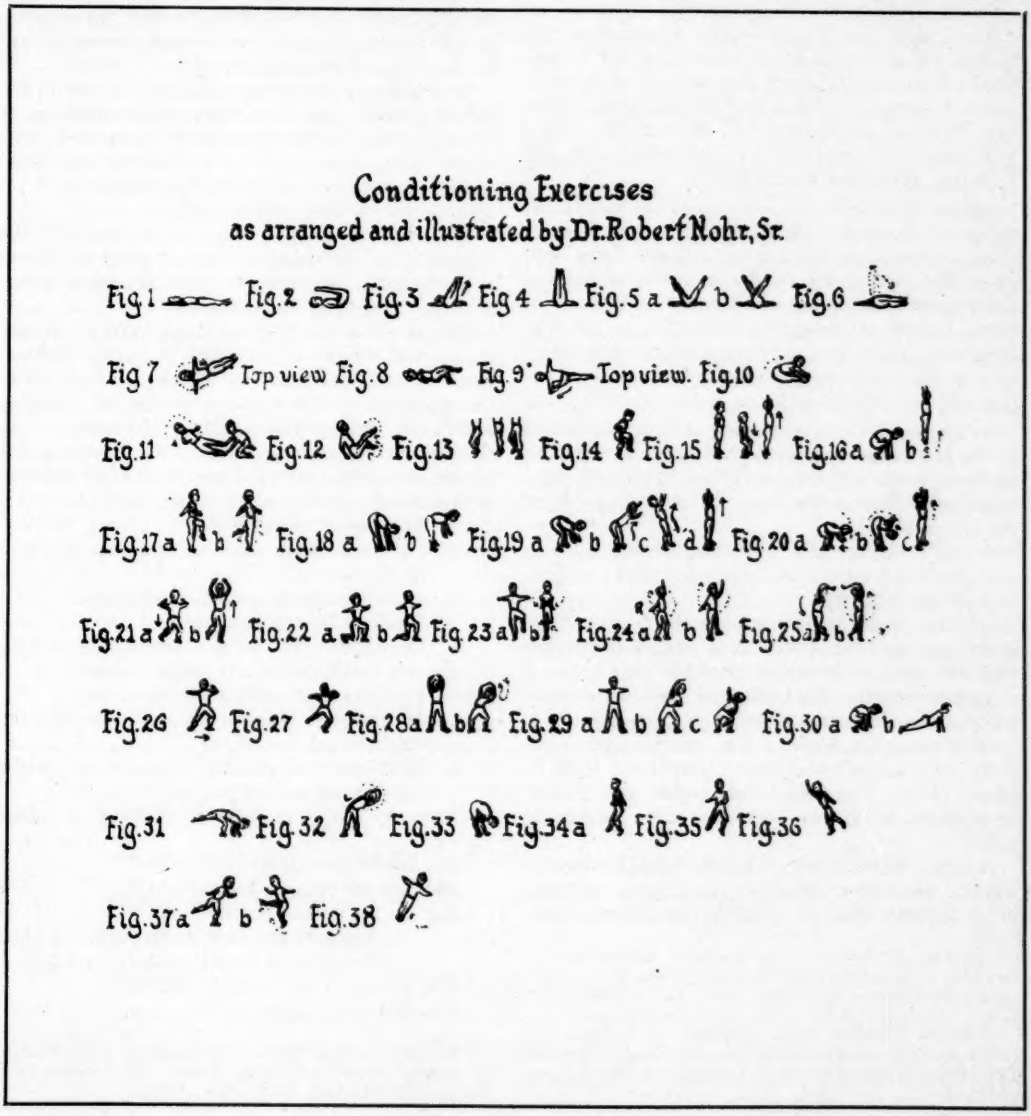
with the arms in the lift Fig. 38—And! Then the L. foot quickly lands—2! Same oppo.—3 And 4! Repeat 5, 16!

This series of Exercises requires about 20 to 22 minutes to execute after they have been mastered and memorized. Beginners should try about ¼ the number of these exercises and repeat each one about 4, later 8 times until proper execution is acquired. Keep adding a few every week or two. Those who have had gym experience try nearly all of the exercises 4 times for a while, then gradually add more and execute each exercise more often as endurance permits. Show lots of vim.

The trunk movements are the most important ones and should be added every day.

It will require lots of willpower to practice daily under all conditions for about two months to acquire the habit and notice the benefits gained.

At the conclusion of the exercises take a short shower bath (hot then temper to cool) and finish with a brisk rub using a Turkish towel to dry the body. Or use a moistened towel to remove the perspiratoin, then finish with the Turkish towel.



SAFETY IN HEALTH AND PHYSICAL EDUCATION

KARL W. BOOKWALTER
Assistant Professor
School of Education, Indiana University

There are evidences of the acceptance of safety as a function of the health and physical education program:

1. By the enumeration of safety as an objective of physical education.
2. By the inclusion of safety education as an activity or content phase of the health and physical education program.

The committee of Curriculum Research of the College Physical Education Association has formulated five objectives which they hold to be those of physical education. These five objectives are briefly —1, Physical development; 2, Recreational skills; 3, Psychological development; 4, Social traits, and 5, Safety skills and knowledges,[1]

Safety instruction has been most frequently assigned to the staff concerned with health instruction. Some states, Indiana for example, have indicated this relationship by definite state regulation. Since health instruction has been found in the National Survey of Secondary Education to be most frequently taught by the physical education teacher, we can infer that most teachers of physical education will be responsible for safety instruction.

In the recent past, there were alarming evidences of the tendencies on the part of supreme courts to lay liability for accidents occurring in physical education activities at the feet of the directors or of the school board.

A San Francisco girl injured in a front roll over two girls was held to have been required to perform beyond her capacity.

In New York, an elementary school girl injured in doing a head stand dislocated a cervical vertebra and was held to be unquestionably performing a dangerous exercise, fantastic and perilous, without adequate supervision.

In Washington State, a boy was injured in activity on a teeter totter board transferred from its proper place. The school and teacher were held to be negligent in allowing the teeter to be improperly used.[2]

A recent supreme court decision found a teacher training institution liable for an accident occurring in an activity class in tumbling for physical education majors. The court ruled on the invalidity of such antics in an educational institution. These are just a sampling. There are definitely other instances.

No longer are we permitted to hide behind the legal principle of "the king can do no wrong." No longer is due and reasonable precaution in conducting activities a safeguard. Apparently pupils must be adequately classified and activities appropriately selected, and apparently the supreme courts will be the judge of these conditions.

So important has safety education become in the public schools that the American Association of School Administrators brought out as its 1940 yearbook "Safety Education," an informative and interesting source book on safety education as a responsibility of the public schools.

It is not the purpose here to discuss only the aspects of safety instruction nor its place in general education, but especially to show the implications of safety to the physical educator.

Let us get down to brass tacks! What are the causes and sources of accidents in physical education? A national study by Frank S. Lloyd under the auspicies of the National Bureau of Casualty and Surety Underwriters[3] made an exhaustive study of accidents in our programs. The following list of causes include some of those found to be definitely associated with accidents in this study:

1. Fatigue—over exercising.
2. Poor condition—lack of training or nutrition.
3. Haste—in hallways and shower rooms.
4. Weak or broken equipment.
5. Crowded play areas—streets, classrooms, and buildings (overly large classes).
6. Poor eye sight or hearing.
7. Poor motor skills—(It's nearly always the dub who get hurts).
8. Inadequate supervision—teacher not on the job or inadequately trained.

Where do accidents occur to children of school age?

1st At Home—34%.
2nd On the School Ground—21%.
3rd In the School Building—15%.
(The gymnasium most frequently.) 45% directly or indirectly related to school.
4th Going to and from School—9%.
5th All other places—21%.

[1] William R. LaPorte, *The Physical Education Curriculum*, College Physical Education Association, University of Southern California Press, Los Angeles, 1938, p. 8.

[2] Paul R. Washke, Legal Liability for Physical Injuries to Students in Public Schools, *Black and Gold*, Phi Epsilon Kappa Fraternity, Indianapolis, March, 1940, pp. 16-19.

[3] Frank S. Lloyd, *Safety in Physical Education in Secondary Schools*, National Bureau of Casualty and Surety Underwriters, New York, 1938.

Of those accidents attributable to physical education activities, what percentage are chargeable to the various phases of the program?

Varsity Athletics	94	per thousand participants.
Class Instruction	6.4	per thousand participants.
Intramurals	.98	per thousand participants.
Free Play	.88	per thousand participants.

Specific Procedures Recommended for Greater Safety in the Various Physical Educational Activities

A study of recommendations recommended variously by Lloyd in his national safety study reveals the following specific procedures to be most frequently mentioned in all activities.

1. Closer supervision — on apparatus, track, shower room, sports, throwing.
2. More adequate conditioning of players.
3. Proper playing surfaces—non-slippery floors.
4. Adequate officiating—pupil officials also better trained.
5. Remove projecting objects in play areas.
6. More adequate safety training of participants.
7. Training players to follow the principles of the game rather than the rules.
8. Avoid congested classes.

What activities were found to be most hazardous?

Touch Football	17.11 per thousand participants.
Heavy Apparatus	13.68 per thousand participants.
Football	8.75 per thousand participants.
LaCrosse	5.97 per thousand participants.
Wrestling	5.71 per thousand participants.
Tumbling	5.15 per thousand participants.

What general factors will make for greater safety in physical education instruction? The following were found by Lloyd to be preeminent.

1. Health Examination of Participants. This should be given at least at the 1-4-7-10-13-grades.
2. Trained leadership—especially informed in physiology of exercise, First Aid, Safety, Grade placement of activities.
3. Student leadership—trained to supervise, trained to teach, trained for "safety" or "spotting".
4. Adequate facilities and equipment. Level surfaced grounds, *adequate mats.*
5. Classification of pupils—especially by structure and maturity.
6. Classification or grade placement of activities.
7. Emotional control—in participants.
8. Supervision and inspection of facilities.
9. Supervision of recess periods and staggered recess periods.
10. Safety instruction—in care and use of facilities. The Boy Scouts of America are sponsoring an intensive health and safety program.
11. Fencing school grounds.

We desire the removal of all hazards to safety that can reasonably be avoided without loss of the essential developmental values of vigorous activities. We realize that some hazards are obvious and removable. Some hazards however are potential though unpredictable. They constitute by their very nature the challenge and the developmental factor, sometimes, in the activity. A completely innocuous activity carries no drive for anything but a "cream puff". The necessities of present day economics, politics, and the social melange require an intelligent, reasonable courage, persistence, and daring. Safety makes adventurous living possible. We must educate our workers in safety procedures, publicize these procedures to the public, and create a public opinion informed of the necessity for challenging activities if virile manhood and womanhood are to exist.

In conclusion—safety is that condition of the environment and that mode of procedure which renders a person and his associates least liable to accidental harm. From this definition and the preceeding discussion, we can see that safety is directly associated with factors which lead to more effective teaching in general. In other words, good teaching implies safe pupils.

Don't Forget

CONFERENCE ON FITNESS FOR WAR AND PEACE. Midwest Physical Education Association, Statler Hotel, April 12-14, Detroit, Michigan

and

WAR AND PEACE FITNESS CONFERENCE. American Association for Health, Physical Education and Recreation, Hotel Pennsylvania and The Hotel New Yorker, New York City, April 24-27.

BOOK REVIEWS

CASSIDY, ROSALIND AND KOZMAN, HILD, CLUTE: *Physical Fitness for Girls.* (N. Y.: A. S. Barnes and Company, '43. Pp. xv, 223.)

A scholarly exposition of the theory of creative teaching of physical education to secondary school girls for war-peace time. The superior leader will get much inspiration from this book but the mediocre or poor teacher will probably turn from its pages. The effects of social changes upon curricular planning is stressed but the newer objective of physical fitness as evidenced by endurances, strengths, bodily controls, relaxations and morales does not imply the abandonment of the previous sound programs of physical education. Neither can the physical education program of sports, dance and exercise achieve total fitness, alone. Some fundamentals, developmental of the above outcomes, are selected. Health examinations, classifications for activity, and guidance are stressed as essential procedures. A "Physical Fitness Workbook for Girls" as an individual guidance device supplements the book. Student leadership is shown to be basic to the democratic way of life and a basis for group guidance. The book is essentially one of principles. Extensive bibliographies accompany this text. Other helps on specific activities, methods and practices may be found in these sources. A work syllabus for major students is appended.

KARL W. BOOKWALTER.

IRWIN, LESLIE W. *The Curriculum in Health and Physical Education.* (The C. V. Mosby Co., St. Louis, Mo. 1944. $3.50.)

This book presents a sound approach to the curriculum in health, physical education, recreation and safety as it has been conceived and developed through experience in the democratic plan of education in the schools and colleges of America. It is based on the desirable and successful activities and practices which have evolved through experience. The text is especially planned to clarify the thinking and give a basis for planning and establishing the best possible programs on the parts of teachers and school administrators. Also, it is suitable as a text in curriculum for use with both undergraduate and graduate students in professional courses in health and physical education.

The references are especially well selected.

The book not only considers the curriculum in health, physical education, recreation, and safety, but it shows the relationship of each, plus a consideration of the problems surrounding the curriculum which are extremely important to the selection and conduct of activities.

It has been prepared and written after more than twelve years of experimentation with activities in a laboratory school. A generation of children entering the kindergarten of the laboratory school has participated in the physical education programs under controlled and careful study throughout the elementary, junior high, and senior high school grades. The results of study and experimentation with these groups are embodied in the book.

ALVIN ROMEISER.

FISHBEIN, MORRIS AND IRWIN, LESLIE W.: *First Aid Training, A Study and Practice Book.* Lyons and Carnahan, Chicago, 1943. Pp. 216. 75c.

As the title states this publication is a study and practice book. It is primarily based upon the American Red Cross Textbook in First Aid and should accordingly be quite serviceable to busy instructors in Red Cross courses. In school courses each student could improve his learning activities by the use of this work book. Guiding questions, unit tests, and brief introductions for each unit aid in assuring pupil activity.

KARL W. BOOKWALTER.